2024-25 School of Graduate Studies Calendar

Degree and Diploma Programs by Graduate Unit

A diverse range of research-oriented and professional programs are offered at both the master’s and doctoral levels. A limited number of graduate diploma programs are also offered.

Table of Contents

Aerospace Studies

Aerospace Studies: Introduction

Faculty Affiliation

Applied Science and Engineering

Degree Programs

Aerospace Science and Engineering

MASc

- Emphases:
  - Aerial Robotics;
  - Sustainable Aviation;
  - Sustainable Energy

MEng

- Emphases:
  - Advanced Manufacturing;
  - Aerial Robotics;
  - Engineering and Globalization;
  - Entrepreneurship, Leadership, Innovation and Technology in Engineering (ELITE);
  - Robotics;
  - Sustainable Aviation;
  - Sustainable Energy

PhD

- Emphases:
  - Aerial Robotics;
  - Sustainable Aviation;
  - Sustainable Energy

Collaborative Specializations

The following collaborative specialization is available to students in participating degree programs as listed below:

- **Psychology, Psychiatry and Engineering**
  - Aerospace Science and Engineering, MASc, PhD
- **Robotics**
  - Aerospace Science and Engineering, MASc, PhD

Overview

Aerospace science and engineering is a cross-disciplinary and multidisciplinary field that allows exploration of the broadest and most fascinating fields of engineering, areas that capture the imagination and encourage exploration beyond our terrestrial existence. The University of Toronto Institute for Aerospace Studies (UTIAS) is Canada's leader for education and research in aerospace engineering, focusing on the technical fields needed to design aircraft and spacecraft. Faculty perform research in the following areas:

- Aeronautics: Aircraft design, systems, and control
- Experimental methods: Laser diagnostics, structural/material analysis, field testing of robotics and aircraft
- Flight simulation: Full motion-based flight simulation with virtual reality capability
- Fluid dynamics: Flow of gasses over aircraft and in engines
- Numerical methods: Computer modeling for fluid flows, structures, design, and optimization
- Orbital mechanics: Satellite/spacecraft dynamics and control
- Propulsion systems: Jet and rocket engines, turbomachinery, combustion science
- Robotics and autonomous systems: Ground, air and space-based systems
- Spacecraft design and construction: Design, construction, and launch of satellites
- Structures and materials: Structural design and optimization, material testing.

Much of this research falls into three main themes:

- Reducing the environmental impact of aviation
- Aerial robotics, drones and unmanned aerial vehicles
- Autonomous systems for space exploration.

Contact and Address

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University of Toronto Institute for Aerospace Studies
4925 Dufferin Street
Toronto, Ontario M3H 5T6 Canada

Aerospace Studies: Graduate Faculty

Full Members

Barfoot, Tim - BASc, PhD
Chaudhuri, Swetaprovo - BE, PhD
D'Eleuterio, Gabriele - BASc, MASc, PhD
Damaren, Christopher - BASc, MASc, PhD ***(Director)***
Davis, James - BASc, MASc, PhD
Ekmekci, Alis - BS, MS, PhD
Emami, Reza - BSc, MSc, PhD
Grant, Peter - BASc, MASc, PhD
Groth, Clinton - BASc, MASc, PhD ***(Associate Director, Graduate Studies)***
Gulder, Omer - BSc, MSc, PhD
Kelly, Jonathan - BSc, MS, MSc, PhD

Lavoie, Philippe - BSE, MSc, PhD ***(Associate Director, Research)***
Liu, Hugh - BSc, MASc, PhD
Nair, Prasanth - BTech, MTech, PhD
Schoellig, Angela - DipIng, MSc, PhD, PhD
Steeves, Craig - BA, BASc, PhD
Steinberg, Adam - BASc, MSc, PhD
Waslander, Steven - BSE, MS, PhD
Yano, Masayuki - BS, SM, PhD
Zee, Robert - BASc, MASc, PhD
Zingg, David - BASc, MASc, PhD

Members Emeriti

DeLaurier, James - BS, MS, PhD, FCASI
Gottlieb, James - BSc, MSc, PhD
Stangeby, Peter - BSc, MSc, PhD

Associate Members

Hooper, Morgan - BASc, MS, PhD
Liu, Fengshan - BSc, PhD
Seiler, Philipp Emanuel - DipIng, PhD

Aerospace Studies: Aerospace Science and Engineering MASc

The Master of Applied Science (MASc) degree is a research-based program focused on the completion of a research thesis. The MASc is considered to provide basic training in research for students subsequent to an undergraduate program. Under the direction of a faculty supervisor, students will select a research topic, perform experiments, computation, or analysis relevant to the topic, and report their results in a thesis. Upon completion of the thesis, students will be prepared for further academic research or employment in industry, including in research and development settings. Top students may have the opportunity to transfer directly to the PhD program after their first year of MASc studies.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy UTIAS's additional admission requirements stated below.
- An appropriate four-year undergraduate degree in in engineering, mathematics, physics, or chemistry from a recognized university.

Completion Requirements

- **Coursework** to be completed in Year 1. Students must complete a minimum of **2.5 full-course equivalents (FCEs)** (five half courses) as follows:
  - All courses must be technical.
  - At least half of the required FCEs must be courses offered at UTIAS.
  - Complete AER1800H *Research Seminar in Aerospace Science and Engineering*.
  - Students must achieve at least a B– average to be in good academic standing. Failure in any course taken for credit may result in termination of the student's registration.
  - Students deemed to have insufficient background may be required to complete supplementary coursework in addition to the required 2.5 FCEs.
- Complete the non-credit course JDE1000H *Ethics in Research*.
- Attend a total of **12 approved seminars**.
- Have **research** performance assessed by a Research Assessment Committee (RAC), which includes the student's supervisor. For students making excellent research progress, the RAC may recommend that a student be considered for direct transfer to the PhD program.
- Write a **thesis** based on research performed during the period of registration for the MASc based on a topic selected in consultation with the student's supervisor.
- Present a **seminar on the student's research** at the UTIAS Departmental MASc Seminar (DMS).
- Students have the option of completing an emphasis in Aerial Robotics; Sustainable Aviation; or Sustainable Energy as part of their degree program. Please see details in the Aerospace Science and Engineering MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW)
Time Limit: 3 years full-time

Aerospace Studies: Aerospace Science and Engineering MEng

The **Master of Engineering (MEng)** is a course-based program designed to lead to employment in the aerospace industry. Students select from the wide range of UTIAS courses, as well as courses offered by other University of Toronto departments, to create a personalized curriculum. Students can also opt to follow one of several emphases, which provide more concentrated teaching in a specific area, and which are recorded on the student's transcript.

The MEng program can be taken on a full-time, extended full-time, or part-time basis. Transfer between the full-time, extended full-time, and part-time options is not permitted after registration. The default registration is the extended full-time option.

MEng Program (Full-Time and Part-Time Options)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy UTIAS's additional admission requirements stated below.

- An appropriate bachelor of applied science degree in engineering, or an equivalent four-year degree from a recognized undergraduate engineering program.

Completion Requirements

- **Coursework.** Completion of **5.0 full-course equivalents (FCEs)** (10 half courses) as follows:
  - A minimum of seven half courses (3.5 FCEs) must be technical.
  - A minimum of half the courses must be offered at UTIAS.
  - A maximum of three 500-level courses (1.5 FCEs) is permitted.
  - For part-time students, a maximum of two half courses (1.0 FCE) may be taken in any session and a maximum of four half courses (2.0 FCEs) may be taken in any academic year.
  - Students must achieve at least a B– average to be in good academic standing. Failure in any course taken for credit may result in termination of the student's registration.
  - Students deemed to have insufficient background may be required to complete supplementary coursework in addition to the required 5.0 FCEs. A maximum of 5.5 FCEs may be taken; permission must be granted by the graduate office to exceed 5.0 FCEs.
  - Full-time students must complete all the required courses within three sessions (one year). Part-time students must complete all the required courses within nine sessions (three years).
- Once students are registered, transfer between the full-time, extended full-time, or part-time option is not permitted.
- Students have the option of completing an emphasis in Advanced Manufacturing; Aerial Robotics; Engineering and Globalization; Entrepreneurship, Leadership, Innovation and Technology in Engineering (ELITE); Robotics; Sustainable Aviation; or Sustainable Energy as part of their degree program. Please see details in the Aerospace Science and Engineering Emphases section.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 9 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MEng Program (Extended Full-Time Option)

Minimum Admission Requirements

- Applicants holding an appropriate bachelor of applied science degree in engineering are considered for admission under the General Regulations of the School of Graduate Studies.
- An appropriate bachelor of applied science degree in engineering, or an equivalent four-year degree from a recognized undergraduate engineering program.

Completion Requirements

- **Coursework.** Students must complete **5.0 full-course equivalents (FCEs)** (10 half courses).
  - A minimum of seven half courses (3.5 FCEs) must be technical.
  - A minimum of half the courses must be offered at UTIAS.
  - A maximum of three 500-level courses (1.5 FCEs) is permitted.
  - A maximum of three half courses (1.5 FCEs) may be taken in any session.
  - A maximum of six half courses (3.0 FCEs) may be taken in any academic year.
  - Students must achieve at least a B– average to be in good academic standing. Failure in any course taken for credit may result in termination of the student's registration.
  - Students deemed to have insufficient background may be required to complete supplementary coursework in addition to the required 5.0 FCEs. A maximum of 5.5 FCEs may be taken; permission must be granted by the graduate office to exceed 5.0 FCEs.
  - Students must complete all the required courses within six sessions (two years).
- Once students are registered, transfer between the full-time, extended full-time, or part-time option is not permitted.
- Students have the option of completing an emphasis in Advanced Manufacturing; Aerial Robotics; Engineering and Globalization; Entrepreneurship, Leadership, Innovation and Technology in Engineering (ELITE); Robotics; Sustainable Aviation; or Sustainable Energy as part of their degree program. Please see details in the Aerospace Science and Engineering Emphases section.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Aerospace Studies: Aerospace Science and Engineering PhD

The Doctor of Philosophy (PhD) degree is a research-based program leading to the production of a research thesis. Doctoral research at UTIAS is expected to be internationally recognized for its originality, rigour, and importance. Supervised by a faculty member, students select a research topic, develop a plan to address the topic, and implement this plan, leading to a major research thesis and contributions to the academic literature. This is the pinnacle of academic achievement, and holders of the PhD are well prepared for academic positions and leadership roles in industrial research and development.

Applicants may enter the PhD program via one of two routes: 1) following completion of an MASc degree in engineering, mathematics, physics, or chemistry; 2) transfer from the University of Toronto MASc program. The program can also be taken on a flexible-time basis.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy UTIAS's additional admission requirements stated below.
- An MASc degree in engineering, mathematics, physics, or chemistry and demonstrated ability to perform advanced research.

Completion Requirements

- Students must maintain **full-time, continuous registration** for every session, including the Summer session, until all degree requirements are completed.
  - Students starting with an MASc degree must spend a minimum of two years in the PhD program.
  - Students with an MASc in a discipline relevant to the field of PhD study are expected to complete the PhD program in less than four years.
- **Coursework.** Students must complete a minimum of **2.0 full-course equivalents (FCEs)** (four half courses) in Years 1 and 2.
  - All courses must be technical.
  - At least half of the required FCEs must be courses offered at UTIAS.
  - Students must achieve at least a B– average to be in good academic standing. Failure in any course taken for credit may result in termination of the student's candidacy.
  - Students deemed to have insufficient background may be required to complete supplementary coursework in addition to the required 2.0 FCEs.
- Students must complete the non-credit course JDE1000H *Ethics in Research* (a half-day workshop).
- Students must attend a total of **24 approved seminars**.
- Students undertake a program of research under the guidance of a Doctoral Examination Committee (DEC), which includes the student's supervisor and two other UTIAS professors. The DEC shall:
  - Ascertain the suitability of the student for advanced research
  - Assess the thesis topic
  - Conduct formal reviews of the student's thesis progress at least once per year; unsatisfactory progress may result in the termination of the student's registration)
  - Determine whether a student qualifies as a candidate for the PhD degree at the second DEC meeting (qualifying DEC), approximately 1.5 years after program start
  - Provide the first assessment of the PhD thesis.
- Students must complete a **thesis** based upon research carried out during the period of registration for the PhD degree.
- Students must present the thesis work at a seminar at the UTIAS **Departmental Doctoral Seminar** (DDS).
- Students must defend the thesis at the **Doctoral Final Oral Examination** pursuant to the SGS Degree Regulations.
- Students must prepare at least one **formal manuscript for publication** in a refereed journal or refereed conference proceedings.
- Students have the option of completing an emphasis in Aerial Robotics; Sustainable Aviation; or Sustainable Energy as part of their degree program. Please see details in the Aerospace Science and Engineering MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- Students who have achieved excellent performance in the MASc program at UTIAS at the end of Year 1 are recommended to transfer directly into the PhD program under the same supervisor. Approval for transfer is based on the student's research ability, research progress during Year 1, and academic standing.

Completion Requirements

- Students must maintain **full-time, continuous registration** for every session, including the Summer session, until all degree requirements are completed.
  - Students transferring directly from the MASc program must spend a minimum of three years in the program from the date of initial MASc registration.
  - Students are expected to complete the PhD program in less than five years.
- **Coursework.** Students must complete a total of **3.5 full-course equivalents (FCEs)** as follows:
  - 2.5 FCEs already completed during the MASc program.
  - A minimum of 1.0 FCE (two half courses) in the PhD program.
  - At least half of the required FCEs must be courses offered at UTIAS.
  - Students must achieve at least a B– average to be in good academic standing. Failure in any course taken for credit may result in termination of the student's registration.
  - All required courses must be completed in the first two years of the program, starting from the initial registration in the MASc program.
- Students must complete the non-credit course JDE1000H *Ethics in Research* (a half-day workshop).
- Students must attend a total of **24 approved seminars**.
- Students undertake a program of research under the guidance of a Doctoral Examination Committee (DEC), which includes the student's supervisor and two other UTIAS professors. The DEC shall:
  - Ascertain the suitability of the student for advanced research
  - Assess the thesis topic

    - Conduct formal reviews of the student's thesis progress at least once per year; unsatisfactory progress may result in the termination of the student's registration
    - Determine whether a student qualifies as a candidate for the PhD degree at the second DEC meeting (qualifying DEC), approximately 1.5 years after program start
    - Provide the first assessment of the PhD thesis.
- Students must present the thesis work at the UTIAS **Departmental Doctoral Seminar (DDS)**.
- Students must defend the thesis at the **Doctoral Final Oral Examination** pursuant to the SGS Degree Regulations.
- Students must prepare at least **one formal manuscript for publication** in a refereed journal or refereed conference proceedings.
- Students have the option of completing an emphasis in Aerial Robotics; Sustainable Aviation; or Sustainable Energy as part of their degree program. Please see details in the Aerospace Science and Engineering MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy UTIAS's additional admission requirements stated below.
- Applicants must have a four-year undergraduate degree in engineering, mathematics, physics, or chemistry.
- Applicants are expected to have achieved grades averaging the equivalent of a University of Toronto A– or better in their last full year of study.

Completion Requirements

- Students must maintain **full-time, continuous registration** for every session, including the Summer session, until all degree requirements are completed.
    - Students must spend a minimum of three years in the direct-entry PhD program.
    - Students are expected to complete the direct-entry PhD program in less than five years.
- **Coursework.** Students must complete a total of **3.5 full-course equivalents (FCEs)** as follows:
    - At least half of the required FCEs must be courses with AER or ROB designators.
    - Students must achieve at least a B– average to be in good academic standing. Failure in any course taken for credit may result in termination of the student's candidacy.
    - All required courses must be completed in the first two years of the program.
    - All courses must be technical.
- Students must complete the non-credit course JDE1000H *Ethics in Research* (a half-day workshop).
- Students must attend a total of **24 approved seminars**.
- Students must undertake a program of research under the guidance of a Doctoral Examination Committee (DEC), which includes the student's supervisor and two other UTIAS professors. The DEC shall:
    - Ascertain the suitability of the student for advanced research
    - Assess the thesis topic
    - Conduct formal reviews of the student's thesis progress at least once per year; unsatisfactory progress may result in the termination of the student's registration)
    - Determine whether a student qualifies as a candidate for the PhD degree at the second DEC meeting (qualifying DEC), approximately 1.5 years after program start
    - Provide the first assessment of the PhD thesis.
- Students must present the thesis work at a seminar at the UTIAS **Departmental Doctoral Seminar** (DDS).
- Students must defend the thesis at the **Doctoral Final Oral Examination** pursuant to the SGS Degree Regulations.
- Students must prepare at least one **formal manuscript for publication** in a refereed journal or refereed conference proceedings.
- Students have the option of completing an emphasis in Aerial Robotics; Sustainable Aviation; or Sustainable Energy as part of their degree program. Please see details in the Aerospace Science and Engineering MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Flexible-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy UTIAS's additional admission requirements stated below.
- An MASc degree in engineering, mathematics, physics, or chemistry and demonstrated ability to perform advanced research.

Completion Requirements

- Students must maintain full-time, continuous registration for the first four years of study. Part-time registration is expected for the remaining period of study within the normal length.
    - Students starting with an MASc degree must spend a minimum of two years in the PhD program.
    - Students with an MASc in a discipline relevant to the field of PhD study are expected to complete the PhD program in less than six years.

- **Coursework.** Students must complete a minimum of **2.0 full-course equivalents (FCEs)** (four half courses) in Years 1 and 2 as follows:
  - All courses must be technical.
  - At least half of the required FCEs must be courses offered at UTIAS.
  - Students must achieve at least a B– average to be in good academic standing. Failure in any course taken for credit may result in termination of the student's candidacy.
  - Students deemed to have insufficient background may be required to complete supplementary coursework in addition to the required 2.0 FCEs.
- Students must complete the non-credit course JDE1000H *Ethics in Research* (a half-day workshop).
- Students must attend a total of **24 approved seminars**.
- Students undertake a program of research under the guidance of a Doctoral Examination Committee (DEC), which includes the student's supervisor and two other UTIAS professors. The DEC shall:
  - Ascertain the suitability of the student for advanced research
  - Assess the thesis topic
  - Conduct formal reviews of the student's thesis progress at least once per year; unsatisfactory progress may result in the termination of the student's registration)
  - Determine whether a student qualifies as a candidate for the PhD degree at the second DEC meeting (qualifying DEC), approximately 24 months after program start
  - Provide the first assessment of the PhD thesis.
- Students must complete a **thesis** based upon research carried out during the period of registration for the PhD degree.
- Students must present the thesis work at a seminar at the UTIAS **Departmental Doctoral Seminar** (DDS).
- Students must defend the thesis at the **Doctoral Final Oral Examination** pursuant to the SGS Degree Regulations.
- Students must prepare at least one **formal manuscript for publication** in a refereed journal or refereed conference proceedings.
- Students have the option of completing an emphasis in Aerial Robotics; Sustainable Aviation; or Sustainable Energy as part of their degree program. Please see details in the Aerospace Science and Engineering MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 6 years full-time
Time Limit: 8 years full-time

Aerospace Studies: Emphases

Advanced Manufacturing

Participating Programs:

- Aerospace Science and Engineering MEng
- Chemical Engineering and Applied Chemistry MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete:

- **Four half courses (2.0 full-course equivalents [FCEs])**, including at least one core course.
- Elective courses may include other core courses, and courses from either of two streams: Manufacturing Engineering and Manufacturing Management.

Core Courses

AER501H1 *Computational Structural Mechanics and Design Optimization*,
AER1403H *Advanced Aerospace Structures*,
APS1028H *Operations and Production Management for Manufacturing and Services*,
CHE1123H *Liquid Biofuels*,
MIE519H1 *Advanced Manufacturing Technologies*,
MIE1740H *Smart Materials and Structures*.

Elective Courses — Manufacturing Engineering

AER1415H,
CHE1134H, CHE1475H,
MIE506H1, MIE540H1, MIE1706H, MIE1709H, MIE1718H, MIE1743H,
MSE1013H, MSE1015H, MSE1028H, MSE1031H, MSE1043H, MSE1058H, MSE1061H,
ROB501H1, ROB521H1.

Elective Courses — Manufacturing Management

APS1012H, APS1013H, APS1017H, APS1020H, APS1023H, APS1088H, APS1420H,
CHE561H1, CHE1434H,
MIE523H1, MIE1022H, MIE1505H, MIE1514H, MIE1715H, MIE1721H, MIE1727H,
TEP1011H, TEP1026H, TEP1501H.

Aerial Robotics

Participating Programs:

- Aerospace Science and Engineering MASc
- Aerospace Science and Engineering MEng
- Aerospace Science and Engineering PhD

MASc and PhD students must successfully complete:

- **1.0 full-course equivalent [FCE])**: AER1216H *Fundamentals of Unmanned Aerial Vehicles* and AER1217H *Development of Autonomous Unmanned Aerial Systems;*
- **one other course** from the approved course list, which will be updated on a regular basis, or other related courses approved by professors; and
- one MASc or PhD **thesis** relevant to unmanned aerial vehicles.

MEng students must successfully complete:

- **1.0 full-course equivalent [FCE])**: AER1216H *Fundamentals of Unmanned Aerial Vehicles* and AER1217H *Development of Autonomous Unmanned Aerial Systems;*
- **one other course** from the approved list or other related courses approved by professors; and
- one MEng **project course** related to unmanned aerial vehicles.

Elective Courses

AER501H1, AER503H1, AER506H1, AER510H1, AER521H1, AER525H1, AER1202H, AER1211H, AER1214H, AER1215H, AER1303H, AER1308H, AER1316H, AER1324H, AER1403H, AER1410H, AER1415H, AER1503H, AER1513H, AER1514H, CSC311H1, CSC2503H, CSC2545H,
ECE537H1, ECE1512H, ECE1505H, ECE1747H, ECE1762H, MIE506H, MIE1740H, MIE1809H,
ROB521H1, ROB1514H.

Engineering and Globalization

Participating Programs:

- Aerospace Science and Engineering MEng
- Biomedical Engineering MEng
- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Electrical and Computer Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete **four half courses (2.0 full-course equivalents [FCEs])** from the following lists, with at least two half courses (or one full course) taken from Group A.

Group A

APS510H1, APS530H1, APS1420H, JCR1000Y (full-year course).

Group B

APS1015H, APS1020H, APS1024H, CHL5700H, CIV1399H.
Note: Students who choose to pursue an MEng project in their home department that aligns with the Centre for Global Engineering (CGEN)'s disciplinary focus, as deemed by the CGEN Director, may count the project as one required Group B course.

Students who complete the requirements of the emphasis in Engineering and Globalization and wish to obtain a notation on their transcript should contact the Faculty Graduate Studies office.

Entrepreneurship, Leadership, Innovation and Technology in Engineering

Participating Programs:

- Aerospace Science and Engineering MEng
- Biomedical Engineering MEng
- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Electrical and Computer Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete **any four of the following courses (2.0 full-course equivalents [FCEs])**:

Leadership

TEP1010H, TEP1011H, TEP1026H, TEP1027H, TEP1029H, TEP1030H, TEP1501H, TEP1502H, TEP1601H.

Entrepreneurship and Innovation

APS511H1, APS1012H, APS1013H, APS1015H, APS1023H, APS1033H, APS1035H, APS1036H, APS1041H, APS1061H, APS1088H.

Finance and Management

AER1601H, APS500H1, APS502H1, APS1001H, APS1004H, APS1009H, APS1016H, APS1017H, APS1020H, APS1022H, APS1028H, APS1032H, APS1043H, APS1049H, APS1050H, APS1051H, APS1052H.

Engineering and Society

APS510H1, APS1018H, APS1024H, APS1025H, APS1031H, APS1034H, APS1090H, APS1101H, APS1420H.

Robotics

Participating Programs:

- Aerospace Science and Engineering MEng
- Electrical and Computer Engineering MEng
- Mechanical and Industrial Engineering MEng

Students must successfully complete **four courses (2.0 full-course equivalents [FCEs])** chosen from at least two of the following groups, and no more than two in any given group:

Group 1: Planning and Control

AER1516H, AER1517H,
ECE557H1, ECE1635H, ECE1636H, ECE1647H, ECE1653H, ECE1657H,
MIE1064H.

Group 2: Perception and Learning

AER1513H, AER1515H,
CSC2503H, CSC2506H, CSC2515H, CSC2541H, CSC2548H,
ECE516H1, ECE1511H, ECE1512H,
JEB1433H,
ROB501H1.

Group 3: Modelling and Dynamics

AER506H1, AER1503H, AER1512H,
JEB1444H,
MIE1001H, MIE1005H.

Group 4: Systems Design and Integration

AER525H1, AER1216H, AER1217H,
CSC2621H,
ECE470H1,
MIE505H1, MIE506H1, MIE1070H, MIE1075H, MIE1076H,
MIE1080H, MIE1809H,
ROB521H1, ROB1514H.

Sustainable Aviation

Participating Programs:

- Aerospace Science and Engineering MEng

MASc and PhD students must successfully complete:

- At least **two half courses (1.0 full-course equivalent [FCE])** from: AER1303H, AER1304H, AER1306H, AER1308H, AER1310H, AER1316H, AER1318H, AER1319H, AER1403H, AER1418H, AER501H1, AER510H1, CIV1307H, PHY1498H, PHY2504H, PHY2505H, CHE1123H, JCC1313H.
- AER1315H (0.5 FCE).
- A thesis in an area of relevance to sustainable aviation with approval of the Scientific Committee.

MEng students must successfully complete:

- At least **four half courses (2.0 FCEs)** from: AER1303H, AER1304H, AER1306H, AER1308H, AER1310H, AER1316H, AER1318H, AER1319H, AER1403H, AER1418H, AER501H1, AER510H1, CIV1307H, PHY1498H, PHY2504H, PHY2505H, CHE1123H, JCC1313H.
- AER1315H (0.5 FCE).

Sustainable Energy

Participating Programs:

- Aerospace Science and Engineering MASc
- Aerospace Science and Engineering MEng
- Aerospace Science and Engineering PhD
- Chemical Engineering and Applied Chemistry MASc
- Chemical Engineering and Applied Chemistry MEng
- Chemical Engineering and Applied Chemistry PhD
- Civil Engineering MASc
- Civil Engineering MEng
- Civil Engineering PhD
- Electrical and Computer Engineering MASc
- Electrical and Computer Engineering MEng
- Electrical and Computer Engineering PhD
- Mechanical and Industrial Engineering MASc
- Mechanical and Industrial Engineering MEng
- Mechanical and Industrial Engineering PhD
- Materials Science and Engineering MASc
- Materials Science and Engineering MEng
- Materials Science and Engineering PhD

MASc and PhD students must successfully complete:

- At least **three half courses (1.5 full-course equivalents [FCEs])** from either of the following lists below.
- A thesis towards their degree on a topic related to sustainable energy. Topics must be approved by the steering committee of the Institute of Sustainable Energy. Contact: emphasis@cpe.utoronto.ca.

MEng students must successfully complete:

- **Four half courses (2.0 FCEs)** from either of the following lists below, including at least one core course (0.5 FCE).

Core Courses

APS1032H *Introduction to Energy Project Management*,
MIE515H1 *Alternative Energy Systems*,
MIE1120H *Current Energy Infrastructure and Resources*.

Elective Courses

AER507H1, AER1304H, AER1315H, AER1415H,
CHE568H1, CHE1053H, CHE1118H, CHE1123H, CHE1142H,
CHE1143H,
CIV575H1, CIV576H1, CIV577H1, CIV1303H, CIV1307H,
ECE1030H, ECE1055H, ECE1057H, ECE1059H, ECE1085H,
ECE1086H, ECE1092H, ECE1094H, ECE1476H,
MIE516H1, MIE517H1, MIE1128H, MIE1129H, MIE1130H,
MIE1132H, MIE1240H, MIE1241H, MIE1715H,
MSE1023H, MSE1028H, MSE1058H.

Contact

All students are asked to register with Climate Positive Energy (CPE) at emphasis@cpe.utoronto.ca, at the beginning of their studies, to receive information about energy-related activities and opportunities on campus. CPE also administers a number of awards and scholarships for which students may be eligible.

Aerospace Studies: Aerospace Science and Engineering: MASc, MEng, PhD Courses

Course timetables are available on the UTIAS website.

Aircraft Flight Systems

Course Code	Course Title
AER503H1	Aeroelasticity
AER1202H	Advanced Flight Dynamics
AER1211H	Human Control of Flight Systems
AER1216H	Fundamentals of Unmanned Aerial Vehicles
AER1217H	Development of Autonomous Unmanned Aerial Systems

Aerodynamics, Fluid Dynamics, and Propulsion

Course Code	Course Title
AER510H1	Aerospace Propulsion
AER1301H	Kinetic Theory of Gases
AER1303H	Advanced Fluid Mechanics
AER1304H	Fundamentals of Combustion
AER1306H	Special Topics in Reacting Flows
AER1307H	Fundamentals of Aeroacoustics
AER1308H	Introduction to Modern Flow Control
AER1310H	Turbulence Modelling
AER1311H	Unsteady Gasdynamics
AER1316H	Fundamentals of Computational Fluid Dynamics
AER1318H	Topics in Computational Fluid Dynamics
AER1319H	Finite Volume Methods for Computational Fluid Dynamics
AER1324H	Introduction to Turbulence

Structures and Multidisciplinary Optimization

Course Code	Course Title
AER501H1	Computational Structural Mechanics and Design Optimization
AER1403H	Advanced Aerospace Structures
AER1404H	Aerospace Materials
AER1405H	Metamaterials for Aerospace Applications
AER1410H	Topology Optimization
AER1415H	Computational Optimization
AER1416H	Numerical Methods for Uncertainty Quantification
AER1418H	Variational Methods for Partial Differential Equations

Sustainable Aviation

Course Code	Course Title
AER1315H	Sustainable Aviation

Robotics and Space Systems Engineering

Course Code	Course Title
AER506H1	Spacecraft Dynamics and Control I
AER521H1	Mobile Robotics and Perception
AER525H1	Robotics
AER1503H	Spacecraft Dynamics and Control II
AER1512H	Multibody Dynamics
AER1513H	State Estimation for Aerospace Vehicles
AER1515H	Perception for Robotics
AER1516H	Robot Motion Planning
AER1517H	Control for Robotics
AER1520H	Microsatellite Design I
AER1521H	Microsatellite Design II
ROB1514H	Mobile Robotics

Management and Policy

Course Code	Course Title
AER1601H	Aerospace Engineering and Operations Management
AER1604H	Air Accident Investigation

Engineering Physics

Course Code	Course Title
AER507H1	Introduction to Fusion Energy
AER1717H	Applied Plasma Physics I

Research Seminars and Professional Courses

Course Code	Course Title
AER1800H	Research Seminar in Aerospace Science and Engineering
AER1810H	MEng Project
JDE1000H	Ethics in Research

Reading Courses

Course Code	Course Title
AER1820H	Directed Reading in Aerospace Studies

APS Engineering Course

Course Code	Course Title
APS1012H	Managing Business Innovation and Transformational Change
APS1043H	Writing Your Own Patent Application

Anthropology

Anthropology: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Anthropology

MA and PhD

- Fields:
  - Archaeology;
  - Evolutionary Anthropology;
  - Linguistic and Semiotic Anthropology;
  - Medical Anthropology;
  - Sociocultural Anthropology

MSc

- Fields:
  - Archaeology;
  - Evolutionary Anthropology;
  - Medical Anthropology

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Aging, Palliative and Supportive Care Across the Life Course**
  - Anthropology, MA, MSc, PhD
- **Contemporary East and Southeast Asian Studies**
  - Anthropology, MA
- **Development Policy and Power**
  - Anthropology, MA, MSc
- **Diaspora and Transnational Studies**
  - Anthropology, MA, MSc, PhD
- **Environmental Studies**
  - Anthropology, MA, MSc, PhD
- **Ethnic, Immigration and Pluralism Studies**
  - Anthropology, MA, PhD
- **Food Studies**
  - Anthropology, MA, PhD
- **Global Health (U of T Global Scholar)**
  - Anthropology, PhD
- **Jewish Studies**
  - Anthropology, MA, PhD
- **Mediterranean Archaeology**
  - Anthropology, PhD
- **Sexual Diversity Studies**
  - Anthropology, MA, MSc, PhD
- **South Asian Studies**
  - Anthropology, MA, MSc, PhD
- **Women and Gender Studies**
  - Anthropology, MA, MSc, PhD
- **Women's Health**
  - Anthropology, MA, MSc, PhD

Overview

Anthropology is concerned with the unity, diversity, and evolution of humanity (and non-human primates) and of human culture and society from a comparative and global perspective. The Department of Anthropology was established in 1936 and has included many of the most prominent figures in Canadian anthropology. The first MA degree was awarded in 1949; the first PhD in 1956.

Members of the department conduct research on present and past human societies, cultural knowledge and practice, evolutionary antecedents, and closely related species. Graduate training is offered in socio-cultural, medical, evolutionary/ biological, linguistic, and archaeological branches of the field. Anthropology students at the University of Toronto can study human biology and evolution; human behaviour from its first appearance in the archaeological record to the first appearance of writing; language and society; anthropology of health; and the diversity of human culture in today's world. Since Anthropology concerns the diversity and commonality of humans over time and around the globe, faculty and graduate research is broadly international and varies in method and theoretical frame. Nonetheless, it coheres in the quest to understand past and present human experience in social, cultural, and evolutionary contexts.

Contact and Address

Web: www.anthropology.utoronto.ca
Email: anthropology.graduate@utoronto.ca
Telephone: (416) 978-5416
Fax: (416) 978-3217

Department of Anthropology
University of Toronto
Room 256, 19 Ursula Franklin Street
Toronto, Ontario M5S 2S2 Canada

Anthropology: Graduate Faculty

Full Members

Bamford, Sandra - BA, MA, MPA, PhD
Banning, Edward - BA, MA, PhD
Barker, Joshua - BA, MA, PhD
Begun, David - BA, MA, PhD
Butler, Donald - BA, MA, PhD
Chazan, Michael - BA, MA, PhD
Cody, Francis - PhD
Coleman, Simon - BA, PhD

Coupland, Gary - BA, MA, PhD
Crawford, Gary - BSc, MA, PhD
Cunningham, Hilary - BA, MA, PhD
Danesi, Marcel - BA, MA, PhD
Daswani, Girish - BSc, BSc, MS, PhD
Dave, Naisargi N. - BA, MA, PhD
De Aguiar Furuie, Vinicius - BA, MA, PhD
Dewar, Genevieve - BS, MA, PhD
Elamin, Nisrin Omer - MA, MA, PhD
Friesen, Max - BA, MA, PhD
Galloway, Tracey - BScN, MA, PhD
Gillison, Gillian - BA, PhD
Hawkins, Alicia - BA, MA, PhD
Heller, Monica - BA, MA, PhD
Hillewaert, Sarah Marleen - BA, MA, MA, PhD
Kalmar, Ivan - BA, MA, PhD
Kilroy-Marac, Katie - MA, MPH, PhD
Krupa, Chris - BA, MA, PhD
Lambek, Michael - BA, MA, PhD
Lehman, Shawn - BA, MA, PhD
Li, Tania - BA, PhD
Luong, Hy Van - BA, PhD
McElhinny, Bonnie - BA, MA, MA, PhD, PhD
Miller, Heather - BA, MSc, MA, PhD
Mittermaier, Amira - MA, PhD
Montgomery, Lindsay Martel - BA, PhD
Muehlebach, Andrea - MA, PhD
Napolitano, Valentina - BSc, MPH, PhD
Parra, Esteban - BA, MA, PhD
Paz, Alejandro - BA, MPA, MA, PhD
Pfeiffer, Susan - BA, MA, PhD
Ramsey, Monica - BA, MA, PhD
Rogers, Tracy - BA, MA, PhD
Samson, David - BA, PhD
Sanders, Todd - BA, MA, MSc, PhD
Satsuka, Shiho - BA, BA, MA, PhD
Sawchuk, Lawrence - BA, MA, PhD
Schillaci, Michael - BA, MA, PhD
Schroeder, Lauren - BSc, BSc, PhD
Sellen, Daniel - BA, AM, PhD
Sidnell, Jack - BA, MA, PhD
Silcox, Mary Teresa - BSc, PhD
Smith, David - BA, MA, PhD
Song, Jesook - BA, PhD ***(Chair and Graduate Chair)***
Swenson, Edward - BA, MA, PhD
Taylor, Janelle - PhD
Teichroeb, Julie - BSc, MA, PhD
Viola, T. Bence - MSc, PhD
Wardlow, Holly - BA, MA, MPH, PhD
Xie, Liye - BA, MA, PhD

Members Emeriti

Boddy, Janice - BA, MA, PhD
Burton, Frances - BSc, MA, PhD
Drewitt, Robert - BA, PhD
Kleindienst, Maxine - BA, MA, PhD
Latta, Martha - BA, MA, DPhil
Lee, Richard - BA, MA, PhD
Levin, Michael - BA, MA, PhD
Mavalwala, Jamshed D - MS, PhD
Philpott, Stuart - BA, MA, PhD
Ray, Ajit - BSc, MSc, PhD
Samarin, William - BA, PhD
Vanderburgh, Rosamond - BA, MA

Associate Members

Cummings, Maggie Irene - BA, MA, PhD
Felsky, Daniel - BSc, PhD
Hung, Rayjean - MSc, DrMedVet, PhD
Jennings, Justin - BA, MA, PhD
Jia, Zhimeng - MD
Kalocsai, Csilla - MPH, MPH, PhD
Mortensen, Lena - BA, MA, PhD
Ness, Rob - BSc, PhD
Patton, Katherine - BA, MA, PhD
Romain, Sandra Jane - PhD
Sapirstein, Philip - BA, PhD
Strug, Lisa - BS, BA, SM, PhD
Young, Donna Jean - BA, MA, PhD

Anthropology: Anthropology MA

The department offers a **Master of Arts (MA) degree program**, both full-time and part-time. The full-time option normally extends over a 12-month period lasting from September to September.

MA Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Anthropology's additional admission requirements stated below.
- B+ average or equivalent.
- Applicants must satisfy the department that they have the appropriate background to enter a particular program of graduate study.
- Two letters of reference.
- A brief statement of interest (not exceeding 1,000 words).

Completion Requirements

- **Coursework.** Students must complete **3.5 full-course equivalents (FCEs)** including:
  - 0.5 FCE: ANT3047H or ANT4010H or ANT6100H
  - 1.0 FCE: ANT2000Y
  - 2.0 FCEs, of which at least 1.0 FCE must be in Anthropology
  - Exceptions to coursework requirements must be approved by the advisor and Graduate Coordinator.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Anthropology: Anthropology MSc

The MSc program is most appropriate for students who are considering careers in consulting archaeology, some aspects of medical or forensic anthropology, NGO work, or application to PhD programs in Anthropology at other Canadian universities. The full-time two-year program is normally completed by the summer of Year 2. The MSc program can be taken on a full-time or part-time basis.

Master of Science

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Anthropology's additional admission requirements stated below.
- B+ average or equivalent.
- Applicants must satisfy the department that they have the appropriate background to enter a particular program of graduate study.
- Two letters of reference.
- A brief statement of interest (not exceeding 1,000 words).

Completion Requirements

- **Coursework.** Students must complete **4.5 full-course equivalents (FCEs)** including:
  - 0.5 FCE: ANT3047H or ANT4010H or ANT6100H
  - 1.0 FCE: ANT2500Y
  - 3.0 FCEs, of which 1.5 FCEs will normally be science courses in archaeology, evolutionary anthropology, medical anthropology, or related disciplines depending on the student's program
  - Exceptions to coursework requirements must be approved by the advisor and Graduate Coordinator.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 9 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Anthropology: Anthropology PhD

The **Doctor of Philosophy (PhD)** is primarily a research degree. A program of study is designed for each student to ensure competence in a field of research, culminating in the writing of a thesis.

Applicants may enter the PhD program via one of two routes: 1) following completion of an appropriate master's degree or 2) direct entry after completing a bachelor's degree.

Depending on subfield or area of research, completion of the PhD may take longer than the indicated program length below. See the departmental handbook for details.

Although the program has been designed for completion in four years (Route 1) or five years (Route 2), some students may require a longer period to complete all of the requirements.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Anthropology's additional admission requirements stated below.
- Admission is offered primarily to excellent students who, by the time of enrolment, have completed a master's degree in anthropology (or a cognate subject).
- All applicants are expected to have achieved grades averaging the equivalent of a University of Toronto A– or better in their last full year of study. Most successful applicants will have finished or be in the process of completing an MA or MSc.
- Applicants must satisfy the department that they have the appropriate background to enter a particular program of graduate study.
- Two letters of reference.
- A brief statement of interest (not exceeding 1,000 words).
- Applicants are required to identify departmental members with whom they want to conduct PhD research. The department regrets that it cannot admit students to the PhD program, regardless of their qualifications, unless a supervisor is available.
- Undergraduate students with strong backgrounds in anthropology or relevant disciplines (grade point average of 3.70 or above in their last 5.0 full-course equivalents [FCEs]) and who have earned an appropriate bachelor's degree with a concentration in anthropology or a cognate discipline may apply directly for admission to the PhD program.

Completion Requirements

- At the beginning of the academic year, each student will submit, with the SGS enrolment form, a program statement describing his or her plan to meet program requirements.
- A minimum of **3.0 full-course equivalents (FCEs)**, of which at least 1.5 FCEs are normally in anthropology.
- Attain at least **an A– average** in coursework to continue in the PhD program in good standing.
- Submit research proposal by the end of the second session of Year 2 (for example, May 1 for students who start in September).
- Before proceeding to **full-time research** (achieving candidacy), students must:
  - Be resident on campus for one year.
  - Complete the minimum of 3.0 FCEs (noted above), of which at least 1.5 FCEs are normally in anthropology.
  - Gain experience in research methods and design; requirement can be filled by completing coursework in methodology or, with the department's assent, undertaking faculty-supervised fieldwork or laboratory research. Each student will normally be

    - involved in fieldwork, in the broad meaning of the term, and in theoretical analysis.
    - Present and defend a **thesis proposal**.
    - Demonstrate an adequate knowledge of at least **one language other than English**, unless their program of study requires the intensive and time-consuming mastery of another research tool; demonstration of adequate language or equivalent knowledge can be accomplished in a variety of ways, a list of which is available in the Department of Anthropology's Graduate Student Handbook.
    - An approved Ethics Protocol for all students working with living organisms and modern human remains.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Anthropology's additional admission requirements stated below.
- Undergraduate students with strong backgrounds in anthropology or relevant disciplines (grade point average of 3.70 or above in their last 5.0 full-course equivalents [FCEs]) and who have earned an appropriate bachelor's degree with a concentration in anthropology or a cognate discipline may apply directly for admission to the PhD program.
- All applicants are expected to have achieved grades averaging the equivalent of a University of Toronto A– or better in their last full year of study.
- Applicants must satisfy the department that they have the appropriate background to enter a particular program of graduate study.
- Two letters of reference.
- A brief statement of interest (not exceeding 1,000 words).
- Applicants are required to identify departmental members with whom they want to conduct PhD research. The department regrets that it cannot admit students to the PhD program, regardless of their qualifications, unless a supervisor is available.

Completion Requirements

- At the beginning of the academic year, each student will submit, with the SGS enrolment form, a program statement describing his or her plan to meet program requirements.
- Students must complete **5.0 graduate full-course equivalents (FCEs)** as follows:
    - 3.0 FCEs, normally taken in Year 1
    - 2.0 FCEs taken in Year 2, when work on the research proposal is also expected to begin.
- Attain an annual average of **at least A–** to continue in the PhD program in good standing.
- Submit **research proposal** by the end of the second session of Year 3 (for example, May 1 for students who start in September).
- Before proceeding to **full-time research** (achieving candidacy), students must:
    - Be resident on campus for one year.
    - Complete the minimum 5.0 FCEs (noted above), of which at least 2.5 FCEs are normally in anthropology.
    - Gain experience in research methods and design; requirement can be filled by completing coursework in methodology or, with the department's assent, undertaking faculty-supervised fieldwork or laboratory research. Each student will normally be involved in fieldwork, in the broad meaning of the term, and in theoretical analysis.
    - Present and defend a **thesis proposal**.
    - Demonstrate an adequate knowledge of at least **one language other than English**, unless their program of study requires the intensive and time-consuming mastery of another research tool; demonstration of adequate language or equivalent knowledge can be accomplished in a variety of ways, a list of which is available in the Department of Anthropology's Graduate Student Handbook.
    - An approved Ethics Protocol for all students working with living organisms and modern human remains.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Anthropology: Anthropology MA, MSc, PhD Courses

Not all courses are offered every year. Check with the department for the current year's offerings.

General

Course Code	Course Title
ANT1096H	Quantitative Methods I
ANT1099H	Quantitative Methods II
ANT1155H	Reading or Research Seminar
ANT1155Y	Reading or Research Seminar
ANT1156H	Reading or Research Seminar
ANT1156Y	Reading or Research Seminar
ANT1157H	Reading or Research Seminar
ANT1157Y	Reading or Research Seminar
ANT1158H	Reading or Research Seminar
ANT1158Y	Reading or Research Seminar
ANT2000Y	MA Research Paper

Course Code	Course Title
ANT2500Y	MSc Research Paper
EIP3000H	Coordinating Seminar: Ethnic, Immigration and Pluralism Studies (for students in the Ethnic, Immigration and Pluralism Studies collaborative specialization)

Archaeology

Course Code	Course Title
JPA1040Y	Advanced Physics and Archaeology
ANT4010H	Archaeology in Contemporary Society
ANT4020H	Archaeology Theory
ANT4025H	Archaeology of Eastern North America
ANT4026H	Arctic Archaeology
ANT4030H	Artifacts
ANT4038H	Archaeology of Urban Development
ANT4039H	Origin and Nature of Food Producing Societies
ANT4040H	Archaeology of Hunter-Gatherers
ANT4041H	Landscape Archaeology
ANT4042H	Archaeology of Complex Hunter-Gatherers
ANT4043H	Archaeology of Ritual, Religion, and Ideology
ANT4044H	Interregional Interaction in the Ancient World
ANT4050H	Zooarchaeology
ANT4051H	Archaeology and Climate Change
ANT4059H	Anthropological Understanding of Cultural Transmission
ANT4060H	Specific Problems: Old World
ANT4065H	Specific Problems: New World
ANT4066H	Household Archaeology
ANT4068H	Archaeology of Technology
ANT4069H	Writing Archaeology
ANT4070H	Archaeologies of Place, Urbanism, and Infrastructures

Evolutionary Anthropology

Course Code	Course Title
ANT3005H	Advanced Topics in Paleoanthropology
ANT3010H	Human Osteology: Theory and Practice
ANT3031H	Advanced Research Seminar I
ANT3031Y	Advanced Research Seminar I
ANT3032H	Advanced Research Seminar II
ANT3032Y	Advanced Research Seminar II
ANT3033H	Advanced Research Seminar III
ANT3034H	Advanced Research Seminar IV
ANT3041H	Evolutionary Perspectives on Growth and Development
ANT3042H	Advanced Topics in Primate Ecology
ANT3045H	Advanced Topics in Non-Human Primate Evolution
ANT3046H	Paleoecology in Primate and Human Evolution
ANT3047H	Evolutionary Anthropology Theory
ANT3048H	Primatological Theory and Methods
ANT3049H	Advanced Seminar in Evolutionary Morphology
ANT3050H	Species Concepts and Human Evolution
ANT3439H	Advanced Seminar in Forensic Anthropology
ANT3440H	Molecular Anthropology: Theory and Practice

Linguistic and Semiotic Anthropology

Course Code	Course Title
ANT5144H	Foundations in Linguistic Anthropology
ANT5150H	Nation, State, and Language in Francophone Canada
JSA5147H	Language, Nationalism, and Post-Nationalism

Medical Anthropology

Course Code	Course Title
ANT7001H	Medical Anthropology I
ANT7002H	Medical Anthropology II
ANT7003H	Global Health: Anthropological Perspectives

Sociocultural Anthropology

Course Code	Course Title
ANT6003H	Critical Issues in Ethnography I

Course Code	Course Title
ANT6005H	Ethnographic Methods Proseminar
ANT6006H	Genealogies of Anthropological Thought
ANT6014H	Media and Mediation
ANT6017H	Post-colonial Science Studies and the Cultural Politics of Knowledge Translation
ANT6018H	Approaches to Nature and Culture
ANT6019H	Anthropology of Neoliberalism
ANT6027H	Anthropology of Violence
ANT6029H	Anthropology of Capitalism
ANT6031H	Advanced Research Seminar I
ANT6031Y	Advanced Research Seminar I
ANT6032H	Advanced Research Seminar II
ANT6033H	Advanced Research Seminar III
ANT6033Y	Advanced Research Seminar III
ANT6034H	Advanced Research Seminar IV
ANT6034Y	Advanced Research Seminar IV
ANT6035H	Advanced Research Seminar
ANT6037H	Advanced Research Seminar VII
ANT6037Y	Advanced Research Seminar VII
ANT6038H	Advanced Research Seminar VIII
ANT6040H	Research Design and Fieldwork Methods
ANT6055H	Anthropology of Subjectivity and Personhood
ANT6056H	Decolonizing Diversity Discourse: Critical and Comparative Accounts of Multiculturalism and Settler Colonialism
ANT6059H	Anthropology and History
ANT6060H	Anthropology and Indigenous Studies in North America
ANT6061H	Anthropology of Sexuality and Gender
ANT6062H	Disability Anthropology
ANT6063H	Anthropology of Infrastructures
ANT6064H	Evidence and Uncertainty: The Politics of Law and Science
ANT6065H	Anthropology in/of Troubled Times
ANT6066H	More-than-Human Ethnography
ANT6100H	History of Anthropological Thought
ANT6150H	Proposing Ethnographic Research
ANT6200H	Ethnographic Practicum

Joint Courses

Course Code	Course Title
JAL1145H	Field Methods
JAR1001H	Anthropology of Religion Gateway Seminar

Applied Psychology and Human Development

APHD: Introduction

Faculty Affiliation

Ontario Institute for Studies in Education (OISE)

Degree Programs

Child Study and Education

MA

- Field:
  - Practice-Based Inquiry in Psychology and Educational Practice

EdD
The next intake for this program will be Fall 2025. Applications for the 2025-26 admissions cycle are set to open in early October 2024.

- Emphases:
  - Early Learning and Early Years;
  - Mental Health and Wellbeing;
  - Special Education

Counselling and Clinical Psychology

MA

- Fields:
  - Clinical and Counselling Psychology — offered by the Department of Applied Psychology and Human Development, OISE, St. George campus;
  - Clinical Psychology — offered by the Graduate Department of Psychological Clinical Science, University of Toronto Scarborough (UTSC)

PhD

- Fields:
  - Clinical and Counselling Psychology — offered by the Department of Applied Psychology and Human Development, OISE, St. George campus;
  - Clinical Psychology — offered by the Graduate Department of Psychological Clinical Science, University of Toronto Scarborough (UTSC)

Counselling Psychology

MEd

- Fields:
  - Counselling and Psychotherapy;
  - Global Mental Health and Counselling Psychology
    - Dual degree program: MEd (University of Toronto) / MAP (Zhejiang University);
    - Dual degree program: MEd (University of Toronto) / MMed (China Medical University);
    - Dual degree program: MEd (University of Toronto) / MSc (China Medical University)
  - Guidance and Counselling

EdD

- Fields:
  - Counselling and Psychotherapy
  - School Psychology

Developmental Psychology and Education

MA, MEd, and PhD

- Emphases:
  - Early Learning (PhD, flexible-time only); admissions have been administratively suspended
  - Program Evaluation (MEd only)

School and Clinical Child Psychology

MA and PhD

Combined Degree Programs

- STG, Education and Society (Minor), Honours BA / Child Study and Education, MA
- STG, Education and Society (Minor), Honours BSc / Child Study and Education, MA
- UTM, Exceptionality in Human Learning (Specialist), Honours BSc / Child Study and Education, MA
- UTM, Psychology (Major), Honours BSc / Child Study and Education, MA
- UTM, Psychology (Specialist), Honours BSc / Child Study and Education, MA

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Addiction Studies**
  - Counselling and Clinical Psychology (Clinical and Counselling Psychology field), MA, PhD

- **Aging, Palliative and Supportive Care Across the Life Course**
  - Counselling and Clinical Psychology, MA, PhD
  - Counselling Psychology, MEd, EdD
- **Community Development** (admissions have been administratively suspended)
  - Counselling and Clinical Psychology (Clinical and Counselling Psychology field), MA
  - Counselling Psychology, MEd
- **Educational Policy** (admissions have been administratively suspended)
  - Developmental Psychology and Education, MA, MEd, PhD
- **Neuroscience**
  - Developmental Psychology and Education, MA, PhD
- **Sexual Diversity Studies**
  - Counselling and Clinical Psychology, MA, PhD
  - Counselling Psychology, MEd, EdD
- **Women and Gender Studies**
  - Counselling and Clinical Psychology, MA, PhD
  - Counselling Psychology, MEd, EdD

Overview

Guided by the highest standards of scholarship and a commitment to equity and social justice, students and faculty in the Department of Applied Psychology and Human Development examine major issues in education, human development, applied psychology and professional practice, answering the critical questions that create action in the professional practice of the hundreds of thousands of teachers, researchers, counsellors, clinical and school psychologists, psychotherapists, professionals, policy makers, leaders, and influencers who are part of the OISE community worldwide.

All programs in the department commence in September.

Contact and Address

Admissions

Initial inquiries regarding admission to graduate studies in the Department of Applied Psychology and Human Development should be made directly to:

Web: www.oise.utoronto.ca/registrar-students
Email: admissions.oise@utoronto.ca
Tel: (416) 978-4300
Fax: (416) 323-9964

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Programs

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APHD: Graduate Faculty

Full Members

Andrade, Brendan - PhD
Ansloos, Jeffrey - PhD
Brian, Jessica - BA, MA, PhD
Chen, Becky - BA, MEd, MA, PhD
Chen, Charles - BA, MEd, MA, PhD
Deacon, Helene - BS, PhD, PhD
Ducharme, Joseph - BA, MPsy, PhD
Ferrari, Michel - BA, MA, PhD
Ganea, Patricia - BA, PhD
Geva, Esther - BA, MA, PhD
Gillis, Roy - BSc, MA, PhD
Goldstein, Abby - BA, MA, PhD ***(Chair and Graduate Chair)***
Haltigan, John - BA, MA, PhD
Hamza, Chloe - BA, MA, PhD
Hawes, Zachary - PhD
Jang, Eunice Eunhee - BA, MA, PhD
Jenkins, Jennifer - BA, MA, PhD
Lee, Kang - BSc, MEd, PhD
Martinussen, Rhonda - BE, MEd, PhD
McCready, Lance - BA, MA, PhD
Moodley, Roy - BA, MA, PhD
Moss, Joan - BA, MA, PhD
O'Sullivan, Julia - BA, MA, PhD
Pelletier, Janette - AB, BE, MEd, PhD
Penner, Melanie - MD
Perlman, Michal - BA, MA, PhD
Peterson-Badali, Michele - BA, MA, PhD
Pyle, Angela - BEd, BA, MEd, PhD
Schmuckler, Mark - BA, PhD
Schneider, Margaret - BA, MA, PhD
Scott, Katreena - BA, MA, PhD
Skilling, Tracey - BA, MASc, PhD
Slotta, James - BS, MPsy, PhD
Stermac, Lana - BSc, MA, PhD
Stewart, Suzanne - BA, MA, PhD
Volpe, Richard - BA, MA, PhD
Wade, Mark - PhD
Watson, Jeanne - PhD
Wiener, Judith - BA, MEd, PhD
Willows, Dale - PhD
Woodruff, Earl - MA, PhD

Members Emeriti

Corter, Carl M. - BA, PhD
Oatley, Keith - BA, PhD

Associate Members

Augimeri, Leena - BA, MEd, PhD
Azimi-Bolourian, Mahshid - PhD
Bedard, Anne-Claude - BSc, MSc, PhD
Brant, Jennifer - BA, MEd, PhD

Cleovoulou, Yiola - BA, BEd, MA, PhD
Crawford, Allison - BSc, MA, MD, PhD
Goodman, Deborah - BA, MSW, DSW
Hampton, Rosalind - BFA, MA, PhD
Hidi, Suzanne - BA, MA, PhD
Ivers, Noah - MD
Ji, Feng - BS, MS, MA, MA, PhD
Katz, Steven - BA, MEd, PhD
Lo, Hung-Tat - MBBS
Patel, Mitesh - BSc, MD
Plamondon, Andre - BA, PhD
Richter, Peggy - MD
Silver, Judith - BSc, PhD
Sloan, Matthew - MSc, MD
Slonim, Naomi - BA, MA, PhD
Tuck, Eve - BA, PhD
Ulanova, Olga - PhD
Vervaeke, John - BSc, BA, MA, PhD
Wnuk, Susan - DipEd, BA, AM, PhD

APHD: Child Study and Education MA

The Master of Arts in Child Study and Education Program is offered at the Dr. Eric Jackman Institute of Child Study, a centre of professional teacher training and research in childhood and education, which includes a Nursery through Grade 6 Laboratory School. The aim is to prepare students for careers as thoughtful, compassionate, and equitable educators who apply research and theory in child study to their teaching to meet the needs of diverse learners and schools.

The philosophy of this program is based on the belief that successful teaching requires an understanding of how children's capacities, concerns, and behaviour change with age, how individual differences reflect developmental changes, and how social and physical environments influence children's development.

The program introduces students to educational and developmental theory and research relevant to educational settings, showing how this research can inform classroom practice. Students also learn how to objectively study children, using both practical assessment and formal methods of inquiry. These areas of knowledge combined with knowledge of effective teaching methods (such as an inquiry-based approach) and learning environments result in educational practices that build on children's current levels of development.

The non-thesis program requires two years of full-time study leading to a Master of Arts degree. Graduates are recommended to the Ontario College of Teachers for a **Certificate of Qualification**, which qualifies the holder to teach in the primary and junior divisions (junior kindergarten to grade 6) of Ontario schools. Research is embedded throughout the courses and the program.

All students in the program are enrolled in Practice-Based Inquiry (PBI) in Psychology and Educational Practice field.

APHD: Child Study and Education MA; Field: Practice-Based Inquiry in Psychology and Educational Practice

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Applied Psychology and Human Development's additional admission requirements stated below.
- An appropriate bachelor's degree (usually a four-year degree) with the equivalent of a University of Toronto mid-B or better in the final year.
- Applicants are also expected to have experience working with groups of children, preferably in responsible positions.
- Normally, an interview is required prior to admission.
- A satisfactory vulnerable sector screening (VSS) police check is required prior to having direct contact with students. Without proof of a satisfactory VSS, schools will not allow teacher education candidates to participate in practice teaching.

Completion Requirements

- **Coursework.** Students must complete **11.0 full-course equivalents (FCEs)** including practicum placements and an internship as follows:
  - **Year 1** — 7.0 FCEs as follows:
    - APD2200Y *Child Study and the Science of Learning*.
    - APD2201Y *Education Seminar I: Professional Practice, Critical Pedagogies, and Social Studies*.
    - APD2210Y *Introduction to Curriculum I: Core Areas*.
    - APD2220Y *Teaching Practicum*.
    - APD2270Y *Adaptive Instruction: Students, Systems, and Supports*.
    - APD1226H *Foundations in Inquiry and Data-Based Decision Making*.
    - 1.5 elective FCEs (equivalent to three half courses) chosen from among master's-level courses in the Department of Applied Psychology and Human Development and, in some cases, other departments; to be completed during the Spring (May/June) and Summer (July/August) sessions.
    - Students without an undergraduate course in child development must take APD1201H *Child and Adolescent Development* as an elective.
    - Eligible students registered in the Primary/Junior division who, in addition to an Ontario Teachers' Certificate of Qualification, wish to pursue the French as a Second Language (FSL) qualification, must successfully complete the following requirements:
      - Pass an OISE French Proficiency Test prior to completing the following two courses.

        - ❖ Complete both CTL7200H *Curriculum and Teaching in French as a Second Language — Primary/Junior* and CTL3204H *L'immersion française: enseignement et recherches* within the elective space.
        - ❖ Complete one practicum placement in a French classroom following successful completion of the French Proficiency Test and both CTL7200H and CTL3204H.
      - Registration in Year 2 of the program is contingent upon successful completion of all Year 1 work.
    - **Year 2** — 4.0 FCEs as follows:
      - APD2211H *Language and Literacy: Understanding, Assessment, and Instruction*.
      - APD2212H *Mathematics Learning and Instruction*.
      - APD2214H *Arts Curriculum and Critical Pedagogies for Cross-Curricular Teaching*.
      - APD2221Y *Teaching Internship*.
      - APD2222H *Professional Practice: Enacting a Research-Informed Learning Cycle*, taken during the internship session of Year 2.
      - APD2223H *Professional Practice: Developing the Skills of Critical Friendship*, taken during the academic session of Year 2.
      - APD2202H *Education Seminar II: Current Issues in Teaching and Learning*, taken during the internship session of Year 2.

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW)
Time Limit: 3 years full-time

APHD: Child Study and Education EdD

This professional doctorate is designed to prepare professionals working in the field of education (or a highly related area) to extend their professional knowledge and practice to further develop their ability to be scholar-practitioners within child study. This program aims to provide practitioners with an advanced degree to enable them to engage in innovation, advanced professional practice, and understand how the field of child study can inform decision making in multiple contexts including the classroom.

This degree is designed for practitioners who are working within contexts in which children are served or supported and/or with individuals who support or guide those who work with children (for example, parents, families, and teachers).

The Doctor of Education (EdD) program is only available on a full-time basis.

Delivery options: Although not all elective courses are offered in each modality, students may be able to complete the EdD degree program through one of two delivery modes:

- in-person (students will mainly complete their coursework and other program requirements in-person, with up to one-third of their coursework online); and
- hybrid (students will experience a mix of modes of engagement, with some of their coursework and other program requirements in-person and between one-third and two-thirds of their coursework online) depending on their choice of emphases and elective courses.

Note: students should consult with their faculty advisor and/or graduate liaison officer regarding available options.

The next intake for this program will be Fall 2025. Applications for the EdD in Child Study and Education for the 2025-26 admissions cycle are set to open early October 2024.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the additional admission requirements of the Department of Applied Psychology and Human Development stated below. Please note that applicants will be accepted into this degree program **every other year**.
- A master's degree: an MA or MEd degree in Education (for example, Master of Arts in Child Study and Education, Master of Education degree, Master of Teaching degree) with high academic standing (equivalent to a B+ or better) from a recognized university. Applicants with master's degrees in other disciplines may be eligible to apply for admission, but may have to complete additional courses in developmental psychology and/or child study.
- Letter of Intent: applicants must submit a well-written letter of intent in which they highlight their research interests, provide some insight into the problem of practice they are currently wishing to address, and describe their professional experiences and how these relate to their research interests and proposed problem of practice.
- Normally applicants will have in-depth work experience (i.e., normally a minimum of 3 years of current or recent work experience) in an education-related field within a school or community setting. They should be able to identify how their work environment would be able to support and facilitate their research related to their problem of practice, which is a major outcome of this degree.
- A letter from an employer supporting the potential candidate's goals and ability to conduct their applied research within the school or community setting is required.
- Applicants who hold an MEd or other non-thesis master's degree must submit evidence of their ability to identify a research question or problem, to design and conduct a research study or project, and to report the findings or results, all in a rigorous manner. This constitutes a Qualifying Research Paper (QRP) or Major Research Paper (MRP). Applicants who do not have a QRP or MRP must provide a writing sample that highlights their ability to write clearly and analytically about issues in education and/or child study. Examples include a single authored master's-level course paper, a policy document, or a professional publication.
- An interview may be required prior to admission.

Completion Requirements

- **Coursework.** Students must complete a minimum of **4.0 full-course equivalents (FCEs)** as follows:
  - APD3301H *Issues in Child Study and Education: Research, Policy, and Problems of Practice (RM)*.

    - APD3302H *Advanced Study of Critical Issues in Special Education, Mental Health, and Child Security*.
    - APD3303H *Advanced Study of Tools and Research Methods for Investigating Problems of Practice: Data-Driven Research for Decision-Making*.
    - APD3304H *Research Proposal Development (RM)*.
    - Two half courses (1.0 FCE) from one of the three emphases: 1) Early Learning and Early Years; 2) Mental Health and Wellbeing; or 3) Special Education. See details on each emphasis below.
    - Research Methods course (select from the list of available research methods courses).
    - APD3305H *Systems and Organizational Change*.
- Students will have successfully reached candidacy once their thesis committee is formed and formal approval of the thesis proposal has been given by the committee.
- The **thesis (Dissertation in Practice)** is the culminating component of the Doctor of Education degree in Child Study and Education that shall include an identification and investigation of a problem of practice, the application of theory and research to problems of practice and/or policy and a design for implementation of ideas arising. Specifically, the thesis (Dissertation in Practice) consists of original research in the form of a written proposal or plan for innovative and impactful educational policy, guideline, advocacy, development project, or activism within an education-related field, aimed at improving practice at local, regional, national, or international levels.
- Students are full-time and must maintain continuous, full-time registration and pay full-time fees until all degree requirements, including the thesis (Dissertation in Practice), are completed.
- Students cannot transfer between the EdD and PhD programs.

Mode of Delivery: In person, Hybrid
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

APHD: Counselling and Clinical Psychology MA; Field: Clinical and Counselling Psychology

The **Counselling and Clinical Psychology program** offers studies leading to the MA and PhD degrees. It is offered by the graduate Department of Applied Psychology and Human Development at the Ontario Institute for Studies in Education (OISE), St. George campus, and the Graduate Department of Psychological Clinical Science at the University of Toronto Scarborough (UTSC).

This graduate program is intended for students seeking to pursue careers in research, teaching, and clinical practice. At the time of application, students will be required to identify a preference for a specific field as well as for a potential supervisor with whom they would work if admitted to the program.

The program has two fields:

- Clinical and Counselling Psychology, offered by OISE;
- Clinical Psychology, offered by UTSC.

The **field in Clinical and Counselling Psychology** is offered by the OISE Department of Applied Psychology and Human Development. This field is based on a bio-psycho-social model with an emphasis on diversity. It shares an emphasis with the Clinical Psychology field on the assessment and treatment of psychopathology in adults.

This **MA program** is designed for applicants interested in working as researchers or practitioners in a variety of psychological and educational settings. This program enables students to apply for registration with the College of Psychologists of Ontario (CPO) as a Psychological Associate. It also fulfils the course and practicum requirements of students who plan to apply to the PhD program, Clinical and Counselling Psychology field at OISE.

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

The MA is taken on a full-time or part-time basis. However, students in the part-time option will be required to complete one year of full-time study to fulfil their degree requirements.

For 2024-25 and further extension to the 2025-26 academic year, admissions to the part-time option have been administratively suspended.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Applied Psychology and Human Development's additional admission requirements stated below.
- An appropriate bachelor's degree in psychology or any appropriate bachelor's degree that would contain the psychology requirement equivalent (defined as 6.0 full-course equivalents [FCEs] in psychology, including 0.5 FCE in research methods and 0.5 FCE in statistics. It is expected that students will have completed 1.0 FCE at the third- or fourth-year level in **each** of three core areas of general psychology:
    - biological bases of behaviour (for example, physiological psychology, comparative psychology, neuropsychology, psychopharmacology);
    - cognitive/affective bases of behaviour (for example, learning, sensation, perception, cognition, thinking, motivation, emotion); and
    - social bases of behaviour (for example, social psychology; cultural, ethnic, and group processes; sex roles; organizational and systems theory).

  Students who are missing courses in these core content areas will be required to complete additional courses during the MA or PhD degrees.
- A standing equivalent to a University of Toronto A– or better in the final year.

Completion Requirements

- **Coursework.** Students must complete a total of **4.5 FCEs** as follows:

  - APD1202H *Theories and Techniques of Counselling and Psychotherapy — Part I*.
  - APD1203Y *Practicum I: Interventions in Counselling Psychology and Psychotherapy* (500 hours of practicum). MA students will attend a minimum of three colloquium presentations during their program, which partially fulfills the course requirements for APD1203Y.
  - APD1208Y *Cognitive and Personality Theory and Assessment*.
  - APD1219H *Ethical Issues in Professional Practice in Psychology and Psychotherapy*.
  - APD1228H *Couples Counselling* **or** APD1261H *Group Work in Counselling and Psychotherapy* (or an equivalent course).
  - APD1263H *Research Methods for Clinical and Counselling Psychology (RM)*.
  - JOI1288H *Intermediate Statistics and Research Design (RM)*.
- **Master's thesis.**
- **Full-time option:** Full-time, on-campus study is required from September to April, which represents the Fall and Winter sessions. Normally, 1.5 FCEs are taken in each of the Fall and Winter sessions and a maximum of 1.0 FCE in the Summer session. Under this option, it is expected that all degree requirements will be completed within two years.
- **Part-time option (for 2024-25 and further extension to the 2025-26 academic year, admissions to the part-time option have been administratively suspended):** For this option, students can register as part-time students at the beginning of their program. However, they will be required to register as full-time students for one year of the program. In this option, students will normally take 1.0 FCE annually during the beginning of their program and 1.5 FCEs in each of the Fall and Winter sessions in their year of full-time study. Once they have begun their last required course, they must register continuously and pay the part-time fees until all degree requirements have been completed. Under this option, it is expected that all degree requirements will be completed within two to three years, up to a maximum of six years.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 10 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

APHD: Counselling and Clinical Psychology PhD; Field: Clinical and Counselling Psychology

The **Counselling and Clinical Psychology program** offers studies leading to the MA and PhD degrees. It is offered by the graduate Department of Applied Psychology and Human Development at the Ontario Institute for Studies in Education (OISE), St. George campus, and the Graduate Department of Psychological Clinical Science at the University of Toronto Scarborough (UTSC).

This graduate program is intended for students seeking to pursue careers in research, teaching, and clinical practice. At the time of application, students will be required to identify a preference for a specific field as well as for a potential supervisor with whom they would work if admitted to the program.

The program has two fields:
- Clinical and Counselling Psychology, offered by OISE;
- Clinical Psychology, offered by UTSC.

The **field in Clinical and Counselling Psychology** is offered by the OISE Department of Applied Psychology and Human Development. This field is based on a bio-psycho-social model with an emphasis on diversity. It shares an emphasis with the Clinical Psychology field on the assessment and treatment of psychopathology in adults.

The principal aim of this **PhD program** is the development of research and theoretical knowledge in counselling and clinical psychology, assessment skills, and knowledge and training in professional issues. Students are expected to conduct advanced research and to develop professional knowledge and skills. Graduates will be prepared to assume a variety of positions in psychological teaching, research, and practice in universities, community settings and agencies offering psychological services, and in university or college counselling centres.

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

The Clinical and Counselling Psychology field offers both a full-time and flexible-time PhD, and progress in the program will be reviewed annually. This field was accredited in both the areas of counselling and clinical psychology by the Canadian Psychological Association (CPA) for a six-year term in 2022. It is currently the only program in Canada to hold such a dual accreditation status.

For 2024-25 and further extension to the 2025-26 academic year, admissions to the flexible-time PhD option have been administratively suspended.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Applied Psychology and Human Development's additional admission requirements stated below.
- An appropriate bachelor's degree in psychology or any appropriate bachelor's degree that would contain the psychology requirement equivalent (defined as 6.0 full-course equivalents [FCEs] in psychology, including 0.5 FCE in research methods and 0.5 FCE in statistics, with a standing equivalent to a University of Toronto A– or better in the final year. It is expected that students will have completed 1.0 FCE at the third- or fourth-year level in **each** of three core areas of general psychology:
  - biological bases of behaviour (for example, physiological psychology; comparative psychology, neuropsychology, psychopharmacology);
  - cognitive/affective bases of behaviour (for example, learning, sensation, perception, cognition, thinking, motivation, emotion); and

    - social bases of behaviour (for example, social psychology; cultural, ethnic, and group processes; sex roles; organizational and systems theory).

  Students who are missing courses in these areas may be required to complete additional courses during the degree.
- A University of Toronto MA degree in Clinical and Counselling Psychology with a grade of A– or better, or its equivalent. However, if the master's program was not equivalent to the U of T MA in Counselling and Clinical Psychology, the student will be required to take additional courses to receive equivalent training.

Completion Requirements

- **Coursework.** Students must complete a minimum of **5.5 FCEs** as follows:
  - 2.5 FCEs in Counselling and Psychotherapy:
    - APD3215H *Advanced Psychotherapy Seminar*;
    - APD3217Y *Advanced Practicum in Clinical and Counselling Psychology* (600-hour practicum); and APD3268Y *Internship in Clinical and Counselling Psychology* (1,600-hour internship — arrangements must be made in consultation with the Director of Clinical Training). PhD students will attend a minimum of six colloquium presentations during their program, which partially fulfills the course requirements for APD3268Y.
  - 1.0 FCE in Psychology Measurement/Assessment and Diagnosis:
    - APD3225H *Assessment and Diagnosis of Personality and Psychopathology*; and
    - APD3260H *Psychodiagnostic Systems.*
  - 0.5 FCE in Supervision and Consultation:
    - APD3261H *Clinical Supervision and Consultation Practicum.*
  - 1.0 FCE in Advanced Research Methods:
    - APD3202H *A Foundation of Program Evaluation in Social Sciences (RM)*; and
    - An advanced-level statistics course (in consultation with supervisors). Courses can be drawn from those offered at OISE or other Faculties with the permission of the instructor.
  - 0.5 FCE in History and Systems Psychology:
    - APD3204H *Contemporary History and Systems in Human Development and Applied Psychology.*
- **Comprehensive examination:** In addition to normal course requirements, students will complete two comprehensive components. First, a manuscript for publication and presentation at a peer review conference, normally in Year 1 of the program. Second, students will be examined systematically in general psychology and in professional psychology. The examination will normally be taken at the end of Year 2 of full-time study.
- **Doctoral dissertation:** All students must develop, complete, and defend in a Doctoral Final Oral Examination a doctoral dissertation supervised by a full-time member of the Counselling and Clinical Psychology faculty. The content of such dissertation research may address theoretical issues applicable to clinical and counselling concerns and practice, relate to the development of programs in a variety of educational or applied settings, or in some other way contribute to the development and practice of clinical and counselling psychology.
- Students must register continuously and pay the full-time fee until all degree requirements have been fulfilled.
- Students cannot transfer between the full-time and flexible-time PhD options.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Flexible-Time)

Minimum Admission Requirements

For 2024-25 and further extension to the 2025-26 academic year, admissions to the flexible-time PhD option have been administratively suspended.

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Applied Psychology and Human Development's additional admission requirements stated below.
- An appropriate bachelor's degree in psychology or any appropriate bachelor's degree that would contain the psychology requirement equivalent (defined as 6.0 full-course equivalents [FCEs] in psychology, including 0.5 FCE in research methods and 0.5 FCE in statistics, with a standing equivalent to a University of Toronto A– or better in the final year. It is expected that students will have completed 1.0 FCE at the third- or fourth-year level in **each** of three core areas of general psychology:
    - biological bases of behaviour (for example, physiological psychology; comparative psychology, neuropsychology, psychopharmacology);
    - cognitive/affective bases of behaviour (for example, learning, sensation, perception, cognition, thinking, motivation, emotion); and
    - social bases of behaviour (for example, social psychology; cultural, ethnic, and group processes; sex roles; organizational and systems theory).

  Students who are missing courses in these areas may be required to complete additional courses during the degree.
- A University of Toronto MA degree in Clinical and Counselling Psychology with a grade of A– or better, or its equivalent. However, if the master's program was not equivalent to the U of T MA in Counselling and Clinical Psychology, the student will be required to take additional courses to receive equivalent training.
- Applicants to the flexible-time PhD option are accepted under the same admission requirements as applicants to the full-time PhD option; the exception is that applicants must demonstrate that they are currently employed, and active professionals engaged in activities relevant to their proposed program of study.

Completion Requirements

- **Coursework.** Students must complete a minimum of **5.5 FCEs** as follows:
  - 2.5 FCEs in Counselling and Psychotherapy:
    - APD3215H *Advanced Psychotherapy Seminar;*
    - APD3217Y *Advanced Practicum in Clinical and Counselling Psychology* (600-hour practicum); and APD3268Y *Internship in Clinical and Counselling Psychology* (1,600-hour internship — arrangements must be made in consultation with the Coordinator of Internship and Counselling Services). PhD students will attend a minimum of six colloquium presentations during their program, which partially fulfills the course requirements for APD3268Y.
  - 1.0 FCE in Psychology Measurement/Assessment and Diagnosis:
    - APD3225H *Assessment and Diagnosis of Personality and Psychopathology*; and
    - APD3260H *Psychodiagnostic Systems.*
  - 0.5 FCE in Supervision and Consultation:
    - APD3261H *Clinical Supervision and Consultation Practicum.*
  - 1.0 FCE in Advanced Research Methods:
    - APD3202H *A Foundation of Program Evaluation in Social Sciences (RM)*; and
    - An advanced-level statistics course (in consultation with supervisors). Courses can be drawn from those offered at OISE or other Faculties with the permission of the instructor.
  - 0.5 FCE in History and Systems Psychology (if not already satisfied by the completion of a third- or fourth-year undergraduate psychology course in this area):
    - APD3204H *Contemporary History and Systems in Human Development and Applied Psychology.*
- **Comprehensive examination:** In addition to normal course requirements, students will complete two comprehensive components. First, a manuscript for publication and presentation at a peer review conference, normally in Year 1 of the program. Second, students will be examined systematically in general psychology and in professional psychology. The examination will normally be taken at the end of Year 2 of full-time study.
- **Doctoral dissertation:** All students must develop, complete, and defend in a Doctoral Final Oral Examination a doctoral dissertation supervised by a full-time member of the Counselling and Clinical Psychology faculty. The content of such dissertation research may address theoretical issues applicable to clinical and counselling concerns and practice, relate to the development of programs in a variety of educational or applied settings, or in some other way contribute to the development and practice of clinical and counselling psychology.
- Students must register continuously until all degree requirements have been fulfilled. They must register full-time during the first four years and may continue as part-time thereafter, with their department's approval.
- Students cannot transfer between the full-time and flexible-time PhD options.

Mode of Delivery: In person

Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

APHD: Counselling Psychology MEd; Field: Counselling and Psychotherapy

The **field in Counselling and Psychotherapy**, within the Counselling Psychology MEd degree program, provides individuals with the opportunity to learn and develop skills appropriate for counselling individuals across a variety of work settings. Students are encouraged to tailor their courses and practicum learning experiences to meet their particular learning goals. Examples of the types of goals for which suitable programs of study could be developed include counselling and psychotherapy with adults, college and university students, or older adults: career counselling; counselling with diverse clients; and counselling and psychotherapy in community mental health and family service settings. The program of study provides students with the basic preparation for certification as a Certified Canadian Counsellor (CCC) with the Canadian Counselling and Psychotherapy Association (CCPA) and as a Registered Psychotherapist with the College of Registered Psychotherapists of Ontario (CRPO).

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

The MEd program is typically offered on a full-time basis with a limited number of part-time spots available.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the additional admission requirements of the Department of Applied Psychology and Human Development stated below.
- An appropriate bachelor's degree of any background or discipline, with a grade equivalent to a University of Toronto B+ or better in the final year, from a recognized university.
- At least one year of relevant counselling-related experience.
- Two letters of reference.

Completion Requirements

- **Coursework.** Students must complete **5.0 full-course equivalents (FCEs)** as follows:
  - APD1202H *Theories and Techniques of Counselling and Psychotherapy — Part I*.
  - APD1203Y *Practicum I: Interventions in Counselling Psychology and Psychotherapy*. The practicum placement is the supervised training component of this course.
  - APD1214H *Critical Multicultural Practice: Diversity Issues in Counselling and Psychotherapy*.
  - APD1219H *Ethical Issues in Professional Practice and Psychotherapy*.

    - APD1260H *Family Therapy* (0.5 FCE) **or** APD1261H *Group Work in Counselling and Psychotherapy*.
    - APD1302H *Theories and Techniques of Counselling and Psychotherapy — Part II*.
    - 1.5 FCEs in electives. Recommended electives: one of
        - APD1266H *Career Counselling and Development: Transition from School to Work*,
        - APD1267H *Emotion-Focused Therapy*,
        - APD1268H *Career Counselling and Development: Transitions in Adulthood*,
        - APD1278H *Cognitive Therapy*.
- A **comprehensive examination**. Upon completion of program course requirements, students must pass a written comprehensive exam of selected topics from the program curriculum and training.
- Optional additional practicum, counted as one of the electives. Students may choose to complete a practicum (APD1247H *Practicum in Adult Counselling and Psychotherapy*) for an additional 250 hours of field placement concurrent with the required course (APD1203Y *Practicum I: Interventions in Counselling Psychology and Psychotherapy*). Arrangements for the practicum placement must be made in consultation with and the approval of the Director of Clinical Training.

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW); 10 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

APHD: Counselling Psychology MEd; Field: Global Mental Health and Counselling Psychology

The **field in Global Mental Health and Counselling Psychology**, within the Counselling Psychology MEd degree program, provides individuals with the opportunity to learn and develop skills appropriate for the field of mental health and counselling psychology in international contexts. Students will be prepared to work in a variety of global applied settings with a focus on mental health. This degree program is ideally suited to students interested in an international perspective of mental health and counselling.

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

This degree is cohort based and is offered full-time only.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the additional admission requirements of the Department of Applied Psychology and Human Development stated below.
- An appropriate bachelor's degree, with a grade equivalent to a University of Toronto B+ or better in the final year, from a recognized university.
- At least one year of relevant counselling-related experience.
- Two letters of reference.
- Normally, an interview is required prior to admission.

Completion Requirements

- **Coursework.** Students must complete **5.0 full-course equivalents (FCEs)** as follows:
    - APD1219H *Ethical Issues in Professional Practice in Psychology and Psychotherapy*.
    - APD1228H *Couples Counselling*.
    - APD1245H *Brief Strategies in Counselling and Psychotherapy*.
    - APD1278H *Cognitive Therapy*.
    - APD1282H *Introduction to Global Mental Health and Counselling Psychology*.
    - APD1283H *Peer and Video-Based Counselling with Practicum Field-Based Learning in Global Mental Health*.
    - APD1902H *Theories and Techniques of Counselling in a Global Context*.
    - APD2293H *Interpretation of Educational Research*.
    - APD5000H *Special Topics in Applied Psychology and Human Development: Master's Level*.
    - In consultation with the program chair, students will take APD1268H *Career Counselling and Development: Transitions in Adulthood*, APD1291H *Addictive Behaviours: Approaches to Assessment and Intervention*, or another elective.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F)
Time Limit: 3 years full-time

APHD: Counselling Psychology MEd; Field: Global Mental Health and Counselling Psychology (Dual Degree Programs)

1) Dual Degree Program: Master of Education (University of Toronto) / Master of Medicine (China Medical University)

This dual degree program creates a pathway between **U of T's Master of Education (MEd) in Counselling Psychology, Global Mental Health and Counselling Psychology (GMHCP) field** and **China Medical University (CMU)'s Master of Medicine (MMed) in Psychiatry and Mental Health** programs.

In Year 1, students complete MMed coursework at CMU in Liaoning Province, China. In Year 2, students complete MEd coursework at U of T in Toronto, Canada. In the Fall session of Year 3, students complete the last course of the MEd requirement (a practicum) in China along with the Year 3 MMed coursework. In Year 3, students will also complete a master's thesis at CMU as part of the dual degree requirements. Students will gain both degrees in three years rather than the four years it would take to acquire the degrees independently.

Contact

Master of Education / Master of Medicine Program
Web: www.oise.utoronto.ca/aphd/programs/master-education-counselling-psychology-global-mental-health-counselling-psychology-field/med

Master of Education Program
Department of Applied Psychology and Human Development, University of Toronto
Email: admissions.oise@utoronto.ca

Master of Medicine Program
Department of Medical Psychology and Mental Health, China Medical University
Email: mqu@cmu.edu.cn

Application Process

- Applicants must apply directly to both the Department of Applied Psychology and Human Development at U of T and the Department of Medical Psychology and Mental Health at CMU. Applicants must apply through U of T's School of Graduate Studies online admissions application system.

Minimum Admission Requirements

- In order to be admitted to the dual degree program, applicants must meet the admission requirements of both programs. The admission requirements of the GMHCP field within the MEd program are stated below.
- Applicants are admitted under the General Regulations of the School of Graduate Studies at the University of Toronto as well as the specific requirements of the MEd program.
- An appropriate bachelor's degree from a recognized university with a standing in the final year equivalent to at least a U of T B+.
- At least one year of relevant counselling experience, which could be paid or volunteer.
- Two letters of reference.
- Normally, an interview is required prior to admission to the MEd program.

Program Requirements

During their U of T registration in the GMHCP field within the MEd program, students must successfully complete a total of **5.0 full-course equivalents (FCEs)**.

Year 1

- **Fall, Winter, and Summer sessions:** students complete Year 1 MMed courses at CMU.

Year 2

- Students complete the following Year 2 MEd courses at U of T.
- **Fall session (1.5 FCEs):**
  - APD1282H *Introduction to Global Mental Health and Counselling Psychology*.
  - APD1902H *Theories and Techniques of Counselling in a Global Context*.
  - In consultation with the program chair, students will take APD1268H *Career Counselling and Development: Transitions in Adulthood*, APD1291H *Addictive Behaviours: Approaches to Assessment and Intervention*, or another elective.
- **Winter session (2.0 FCEs):**
  - APD1219H *Ethical Issues in Professional Practice in Psychology and Psychotherapy*.
  - APD1245H *Brief Strategies in Counselling and Psychotherapy*.
  - APD1278H *Cognitive Therapy*.
  - APD2293H *Interpretation of Educational Research*.
- **May-to-June period of the Summer session (0.5 FCE):**
  - APD1228H *Couples Counselling*.
- **July-to-August period of the Summer session (0.5 FCE):**
  - APD5000H *Special Topics in Applied Psychology and Human Development: Master's Level*.

Year 3

- **Fall session (0.5 FCE):**
  - Complete the U of T MEd course APD1283H *Peer and Video-Based Counselling with Practicum Field-Based Learning in Global Mental Health*. This is a 250-hour placement in an approved field setting and must be arranged prior to admission to this program.
  - Continue the MMed program requirements at CMU.
- **Winter and Summer sessions:**
  - Complete the MMed program requirements at CMU.

Program Length

9 sessions full-time (typical registration sequence: F/W/S/F/W/S/F/W/S)

2) Dual Degree Program: Master of Education (University of Toronto) / Master of Science (China Medical University)

This dual degree program creates a pathway between **U of T's Master of Education (MEd) in Counselling Psychology, Global Mental Health and Counselling Psychology (GMHCP) field** and **China Medical University (CMU)'s Master of Science (MSc) in Applied Psychology** programs.

In Year 1, students complete MSc coursework at CMU in Liaoning Province, China. In Year 2, students complete MEd coursework at U of T in Toronto, Canada. In the Fall session of Year 3, students complete the last course of the MEd requirement (a practicum) in China along with the Year 3 MSc coursework. In Year 3, students will also complete a master's thesis at CMU as part of the dual degree requirements.

Students will gain both degrees in three years rather than the four years it would take to acquire the degrees independently.

Contact

Master of Education / Master of Science Program
Web: www.oise.utoronto.ca/aphd/programs/master-education-counselling-psychology-global-mental-health-counselling-psychology-field/med

Master of Education Program
Department of Applied Psychology and Human Development, University of Toronto
Email: admissions.oise@utoronto.ca

Master of Science Program
Department of Applied Psychology, China Medical University
Email: mqu@cmu.edu.cn

Application Process

- Applicants must apply directly to both the Department of Applied Psychology and Human Development at U of T and the Department of Applied Psychology at CMU. Applicants must apply through U of T's School of Graduate Studies online admissions application system.

Minimum Admission Requirements

- In order to be admitted to the dual degree program, applicants must meet the admission requirements of both programs. The admission requirements of the GMHCP field within the MEd program are stated below.
- Applicants are admitted under the General Regulations of the School of Graduate Studies at the University of Toronto as well as the specific requirements of the MEd program.
- An appropriate bachelor's degree from a recognized university with a standing in the final year equivalent to at least a U of T B+.
- At least one year of relevant experience, which could be paid or volunteer.
- Two letters of reference.
- Normally, an interview is required prior to admission to the MEd program.

Program Requirements

During their U of T registration in the GMHCP field within the MEd program, students must successfully complete a total of **5.0 full-course equivalents (FCEs)**.

Year 1

- **Fall, Winter, and Summer sessions:** students complete Year 1 MSc courses at CMU.

Year 2

- Students complete the following Year 2 MEd courses at U of T.
- **Fall session (1.5 FCEs):**
  - APD1282H *Introduction to Global Mental Health and Counselling Psychology*.
  - APD1902H *Theories and Techniques of Counselling in a Global Context*.
  - In consultation with the program chair, students will take APD1268H *Career Counselling and Development: Transitions in Adulthood*, APD1291H *Addictive Behaviours: Approaches to Assessment and Intervention*, or another elective.
- **Winter session (2.0 FCEs):**
  - APD1219H *Ethical Issues in Professional Practice in Psychology and Psychotherapy*.
  - APD1245H *Brief Strategies in Counselling and Psychotherapy*.
  - APD1278H *Cognitive Therapy*.
  - APD2293H *Interpretation of Educational Research*.
- **May-to-June period of the Summer session (0.5 FCE):**
  - APD1228H *Couples Counselling*.
- **July-to-August period of the Summer session (0.5 FCE):**
  - APD5000H *Special Topics in Applied Psychology and Human Development: Master's Level*.

Year 3

- **Fall session (0.5 FCE):**
  - Complete the U of T MEd course APD1283H *Peer and Video-Based Counselling with Practicum Field-Based Learning in Global Mental Health*. This is a 250-hour placement in an approved field setting and must be arranged prior to admission to this program.
  - Continue the MSc program requirements at CMU.
- **Winter and Summer sessions:**
  - Complete the MSc program requirements at CMU.

Program Length

9 sessions full-time (typical registration sequence: F/W/S/F/W/S/F/W/S)

3) Dual Degree Program: Master of Education (University of Toronto) / Master of Applied Psychology (Zhejiang University)

This dual degree program creates a pathway between **U of T's Master of Education (MEd) in Counselling Psychology, Global Mental Health and Counselling Psychology (GMHCP) field** and **Zhejiang University (ZJU)'s Master of Applied Psychology (MAP)** programs.

In Year 1, students complete MAP coursework at ZJU in Hangzhou, China. In Year 2, students complete MEd coursework at U of T in Toronto, Canada. In the Fall session of Year 3, students complete the last course of the MEd requirement (a practicum) in China along with the Year 3 MAP coursework.

In Year 3, students will also complete a master's thesis at ZJU as part of the dual degree requirements.

Students will gain both degrees in three years rather than the four years it would take to acquire the degrees independently.

Contact

Master of Education / Master of Science Program
Web: www.oise.utoronto.ca/aphd/programs/master-education-counselling-psychology-global-mental-health-counselling-psychology-field/med

Master of Education Program
Department of Applied Psychology and Human Development, University of Toronto
Email: admissions.oise@utoronto.ca

Master of Applied Psychology Program
Department of Psychology and Behavioural Science, Zhejiang University
Email: jiananzhong@zju.edu.cn

Application Process

- Applicants must apply directly to both the Department of Applied Psychology and Human Development at U of T and the Department of Psychology and Behavioural Science at ZJU. Applicants must apply through U of T's School of Graduate Studies online admissions application system.

Minimum Admission Requirements

- In order to be admitted to the dual degree program, applicants must meet the admission requirements of both programs. The admission requirements of the GMHCP field within the MEd program are stated below.
- Applicants are admitted under the General Regulations of the School of Graduate Studies at the University of Toronto as well as the specific requirements of the MEd program.
- An appropriate bachelor's degree from a recognized university with a standing in the final year equivalent to at least a U of T B+.
- At least one year of relevant experience, which could be paid or volunteer.
- Two letters of reference.
- Normally, an interview is required prior to admission to the MEd program.

Program Requirements

During their U of T registration in the GMHCP field within the MEd program, students must successfully complete a total of **5.0 full-course equivalents (FCEs)**.

Year 1

- **Fall, Winter, and Summer sessions:** students complete Year 1 MAP courses at ZJU.

Year 2

- Students complete the following Year 2 MEd courses at U of T.
- **Fall session (1.5 FCEs):**
  - APD1282H *Introduction to Global Mental Health and Counselling Psychology*.
  - APD1902H *Theories and Techniques of Counselling in a Global Context*.
  - In consultation with the program chair, students will take APD1268H *Career Counselling and Development: Transitions in Adulthood*, APD1291H *Addictive Behaviours: Approaches to Assessment and Intervention*, or another elective.
- **Winter session (2.0 FCEs):**
  - APD1219H *Ethical Issues in Professional Practice in Psychology and Psychotherapy*.
  - APD1245H *Brief Strategies in Counselling and Psychotherapy*.
  - APD1278H *Cognitive Therapy*.
  - APD2293H *Interpretation of Educational Research*.
- **May-to-June period of the Summer session (0.5 FCE):**
  - APD1228H *Couples Counselling*.
- **July-to-August period of the Summer session (0.5 FCE):**
  - APD5000H *Special Topics in Applied Psychology and Human Development: Master's Level*.

Year 3

- **Fall session (0.5 FCE):**
  - Complete the U of T MEd course APD1283H *Peer and Video-Based Counselling with Practicum Field-Based Learning in Global Mental Health*. This is a 250-hour placement in an approved field setting and must be arranged prior to admission to this program.
  - Continue the MAP program requirements at ZJU.
- **Winter and Summer sessions:**
  - Complete the MAP program requirements at ZJU.

Program Length

9 sessions full-time (typical registration sequence: F/W/S/F/W/S/F/W/S)

APHD: Counselling Psychology MEd; Field: Guidance and Counselling

The **field in Guidance and Counselling**, within the Counselling Psychology MEd degree program, provides individuals with the opportunity to learn and develop skills appropriate for the field of guidance and counselling in the schools. Strong preference for admission to this field is given to experienced teachers who are interested in specializing in guidance and counselling in the schools. The program of study provides students with the basic preparation for certification as a Certified Canadian Counsellor (CCC) with the Canadian Counselling and Psychotherapy Association (CCPA).

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

The MEd program is typically offered on a full-time basis with a limited number of part-time spots available.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the additional admission requirements of the Department of Applied Psychology and Human Development stated below.
- An appropriate bachelor's degree, with a grade equivalent to a University of Toronto B+ or better in the final year, from a recognized university.
- Teacher certification.

Completion Requirements

- **Coursework.** Students must complete **5.0 full-course equivalents (FCEs)** as follows:
  - APD1202H *Theories and Techniques of Counselling and Psychotherapy — Part I*.
  - APD1203Y *Practicum I: Interventions in Counselling Psychology and Psychotherapy*. The practicum placement is the supervised training component of this course.
  - APD1214H *Critical Multicultural Practice: Diversity Issues in Counselling and Psychotherapy*.
  - APD1219H *Ethical Issues in Professional Practice in Psychology and Psychotherapy*.
  - APD1260H *Family Therapy* (0.5 FCE) **or** APD1261H *Group Work in Counselling and Psychotherapy*.
  - APD1262H *Educational Psychological Testing for Counselling*.
  - APD1266H *Career Counselling and Development: Transition from School to Work*.
  - APD1302H *Theories and Techniques of Counselling and Psychotherapy — Part II*.
  - 0.5 FCE in electives.
- A **comprehensive examination**. Upon completion of program course requirements, students will take a comprehensive examination of selected topics from the program curriculum and training.
- **Optional additional practicum**. Students may choose to complete a practicum (APD1247H *Practicum in Adult Counselling and Psychotherapy*) for an additional 250 hours of field placement concurrent with the required course APD1203Y *Practicum I: Interventions in Counselling Psychology and Psychotherapy*. Arrangements for the practicum placement must be made in consultation with and the approval of the Director of Clinical Training.

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW); 10 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

APHD: Counselling Psychology EdD; Field: Counselling and Psychotherapy

Advanced counsellor training in this degree program emphasizes the role of the counsellor in educational and community settings with expertise in supervisory and consultative skills and advanced counselling theory and practice. Graduates will be prepared to take leadership positions in the field of counselling and psychotherapy as educators in colleges and institutes of education; as directors and coordinators of school guidance programs; as specialists in the provision of counselling-related, in-service training for school and college personnel; and as providers of advanced levels of personal counselling in community and educational settings.

The **field in Counselling and Psychotherapy** will be especially attractive to individuals who have demonstrated a career commitment to the provision of counselling-related services in an educational and community setting. This professional doctorate is designed to prepare students to refine and build on professional knowledge and practice to support the development of scholar-practitioners to be leaders in their fields of professional practice.

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

The Doctor of Education (EdD) program is only available on a full-time basis.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the additional admission requirements of the Department of Applied Psychology and Human Development stated below.
- Applicants must have the following to be admitted to the EdD program:
  - A **bachelor's degree**: an appropriate bachelor's degree of any background or discipline from a recognized university, with high academic standing.
  - A **master's degree**: an MA or MEd degree in Counselling Psychology or School and/or Clinical Child Psychology from the University of Toronto with a grade of B+ or better, or its equivalent from a recognized university. The applicant must have had successful professional experience and interest to increase and advance their knowledge of counselling and psychotherapy to become leaders in their fields. Applicants who hold an MEd or other non-thesis master's degree must submit evidence of their ability to identify a research question or problem, to design and conduct a research study or project, and to report the findings or results, all in a rigorous manner. This constitutes a Qualifying Research Paper (QRP).

Completion Requirements

- **Coursework.** Students must take courses related to the development of advanced competence in counselling, psychotherapy, and mental health theory and practice and become sophisticated consumers of research in these and related fields. Students must complete a minimum of **5.5 full-course equivalents (FCEs)** including a practicum, internship, and thesis (dissertation in practice) as follows:
  - APD3115H *Research Proseminar in Counselling and Psychotherapy*.
  - APD3215H *Advanced Psychotherapy Seminar*.
  - APD3261H *Clinical Supervision and Consultation Practicum*.
  - APD3217Y *Advanced Practicum in Clinical and Counselling Psychology*: complete a 500-hour practicum before the Final Oral Examination.
  - APD3270H *EdD Internship*: complete 500 hours of internship, typically after the Final Oral Examination. All internship arrangements must be made in consultation with the Director of Clinical Training.
  - Three courses, one from each of the following three groupings:
    - APD3116H *Proseminar II: Practice-Based Research in School and Counselling Psychology*
    - APD3178H *Advanced Cognitive Behaviour Therapy* (0.5 FCE) **or** APD3160H *Advanced Family Therapy*.
    - APD3260H *Psychodiagnostic Systems* **or** one elective in a special focus of interest.
  - In addition, students must take 1.0 FCE in their specific area of **focus**.
    - Option 1: Counselling and Psychotherapy for Adults
      - APD3163H *Advanced Multicultural Counselling and Psychotherapy*
      - One elective in a special **focus** of interest
    - Option 2: Counselling and Psychotherapy for Schools and Youth
      - APD5284Y *Assessment and Intervention with Culturally and Linguistically Diverse Children, Youth, and Families*.
- **Optional additional practicum.** Students may choose to take an optional continuous practicum (APD3271H *Additional PhD Practicum*) in conjunction with the required doctoral practicum course APD3217Y *Advanced Practicum in Clinical and Counselling Psychology*.
- **Thesis (dissertation in practice).** All students must complete a thesis (dissertation in practice), the aim of which is to ensure excellent knowledge of counselling and psychotherapy theory, practice, and policy for professionals working with adults or youth to function as leading scholar-practitioners. The thesis (dissertation in practice) should be: a) well conceived, original, and likely to make a sustained contribution to mental health practice; b) involve creativity, innovative methods and techniques, and have the potential to improve practice; c) exemplary, sets high standards in the field, and can be emulated and; d) has the potential for significant public impact. The focus of the thesis (dissertation in practice) is expected to be on contributions to field development or to innovations in practice. Students will defend their thesis (dissertation in practice) at a Final Oral Examination.
- Students are full-time and must maintain continuous, full-time registration and pay full-time fees until all degree requirements, including the thesis (dissertation in practice), are completed.
- Students cannot transfer between the EdD and PhD programs.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

APHD: Counselling Psychology EdD; Field: School Psychology

Counsellor training in this degree program emphasizes the role of the counsellor in educational and community settings with the goal of enhancing their expertise in their professional roles including supervisory and consultative skills and the advanced study of counselling theory and practice. Graduates will be prepared to take leadership positions in the field of counselling and psychotherapy; as educators in colleges and institutes of education; as directors and coordinators of school guidance programs; as specialists in the provision of counselling-related, in-service training for school and college personnel; and as providers of advanced levels of personal counselling in community and educational settings.

The **field in School Psychology** will be especially attractive to practitioners providing direct services to children and youth in the education system (K-12) and will provide school psychology practitioners with core theoretical and practical training needed to develop research-informed leaders in the field of school psychology. The program is structured to provide students with the requirements necessary for registration as a School Psychologist with the College of Psychologists of Ontario.

The Doctor of Education (EdD) program is only available on a full-time basis.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the additional admission requirements of the Department of Applied Psychology and Human Development stated below.
- Applicants must have the following to be admitted to the EdD program:
  - A **bachelor's degree**: an appropriate bachelor's degree of any background or discipline from a recognized university, with high academic standing.
  - A **master's degree**: an MA or MEd degree in Counselling Psychology or School and/or Clinical Child Psychology from the University of Toronto with a grade of B+ or better, or its equivalent from a recognized university. The applicant must have had successful professional experience and interest to increase and advance their knowledge of school psychology, counselling, and psychotherapy to become leaders in their fields. Applicants who hold an MEd or other non-thesis master's degree must submit evidence of their ability to identify a research

question or problem, to design and conduct a research study or project, and to report the findings or results, all in a rigorous manner. This constitutes a Qualifying Research Paper (QRP).
    - Applicants must demonstrate either undergraduate- or graduate-level competence in each of the six core content areas of psychology: 1) Biological Bases of Behaviour; 2) Cognitive/Affective Bases of Behaviour; 3) Historical and Scientific Foundations of Psychology; 4) Scientific and Professional Ethics (graduate level); and 5) Social Bases of Behaviour; and 6) Psychology of the Individual, by successful completion of
        - 1.0 full-course equivalent (FCE) at the second-, third-, or fourth-year undergraduate level **or**
        - 0.5 FCE at the graduate level.
    - If the above requirements are not met, students must take additional courses to ensure they have completed the above requirements by the end of their program.

Completion Requirements

- **Coursework.** Students must take courses related to the development of advanced competence in counselling, psychotherapy, and mental health theory and practice and become sophisticated consumers of research in these and related fields. Students must complete a minimum of **5.5 full-course equivalents (FCEs)** including a practicum, internship, and thesis (dissertation in practice) as follows:
    - APD3115H *Research Proseminar in Counselling and Psychotherapy*.
    - APD3215H *Advanced Psychotherapy Seminar*.
    - APD3261H *Clinical Supervision and Consultation Practicum*.
    - APD3217Y *Advanced Practicum in Clinical and Counselling Psychology*. Complete 600 hours of practicum before the Final Oral Examination.
    - APD3401H *Assessment with Culturally and Linguistically Diverse Children, Youth, and Families*.
    - APD3402H *Intervention with Culturally and Linguistically Diverse Children, Youth, and Families*.
    - APD3403H *EdD Internship in School Psychology*: complete 1,600 hours of internship, typically after the Final Oral Examination. All internship arrangements must be made in consultation with the Director of Clinical Training.
    - Three courses, one from each of the following three groupings:
        - APD3116H *Proseminar II: Practice-Based Research in School and Counselling Psychology*.
        - APD3178H *Advanced Cognitive Behaviour Therapy* **or** APD3160H *Advanced Family Therapy*.
        - APD3260H *Psychodiagnostic Systems* **or** one elective in a special focus of interest.
- **Optional additional practicum.** Students may choose to take an optional continuous practicum (APD3271H *Additional Doctoral Practicum*) in conjunction with the required doctoral practicum course APD3217Y *Advanced Practicum in Clinical and Counselling Psychology*.
- **Thesis (dissertation in practice).** All students must complete a thesis (dissertation in practice), the aim of which is to ensure excellent knowledge of counselling or school psychology theory, practice, and policy for professionals working with adults or children/youth to function as leading scholar-practitioners. The thesis (dissertation in practice) should be: a) well conceived, original, and likely to make a sustained contribution to mental health or school psychology practice; b) involve creativity, innovative methods and techniques, and have the potential to improve practice; c) exemplary, sets high standards in the field, and can be emulated and; d) has the potential for significant public impact. The focus of the thesis (dissertation in practice) is expected to be on contributions to field development or to innovations in practice. Students will defend their thesis (dissertation in practice) at a Final Oral Examination.
- Students are full-time and must maintain continuous, full-time registration and pay full-time fees until all degree requirements, including the thesis (dissertation in practice), are completed.
- Students cannot transfer between the EdD and PhD programs.

Mode of Delivery: Hybrid
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

APHD: Developmental Psychology and Education MA

The Developmental Psychology and Education program offers studies leading to the MA, MEd, and PhD degrees. Students have an opportunity to construct an overall perspective on developmental psychology and human development and their implications for practice with children in educational and other applied settings.

Students take foundation courses in human development and research methodology in consultation with their advisor. Elective courses cover a range of areas including cognitive, social, and emotional development; cognition and instruction (language, literacy, and mathematics); special education and adaptive instruction; developmental neuroscience; advanced research methodology and evaluation; and early childhood policy and programs, including child care. The MA program is designed for students wishing to pursue an academic or research-based career.

Delivery modes: Although not all elective courses are offered in each modality, students may be able to complete the MA degree program through one of two delivery modes:

- in-person (students will mainly complete their coursework and other program requirements in-person, with up to one-third of their coursework online); and
- hybrid (students will experience a mix of modes of engagement, with some of their coursework and other program requirements in-person and between one-third and two-thirds of their coursework online) depending on their choice of elective courses.

Note: students should consult with their faculty advisor and/or graduate liaison officer regarding available options.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Applied Psychology and Human Development's additional admission requirements stated below.
- An appropriate bachelor's degree with the equivalent of a University of Toronto A– or better. Although most applicants will have a degree in psychology, applicants with an appropriate bachelor's degree in cognitive science, computer science, linguistics, or a helping profession such as occupational therapy, speech-language pathology, physiotherapy, nursing, social work, or another discipline relevant to their specific program of study are also eligible to apply for admission.

Completion Requirements

- **Coursework.** Students must complete **2.0 full-course equivalents (FCEs)** as follows:
  - APD1209H *Research Methods and Thesis Preparation in Human Development and Applied Psychology*.
  - JOI1288H *Intermediate Statistics and Research Design (RM)*.
  - Two elective courses (1.0 FCE total) chosen in consultation with the student's advisor, which may include APD2252H *Individual Reading and Research*.
  - Students who have not taken a previous course in human development are required to take APD1201H *Child and Adolescent Development* or an equivalent.
  - In addition to their required 2.0 FCEs, students who have not taken a previous course in statistics are required to take JOI1287H *Introduction to Applied Statistics* or an equivalent course.
- **Master's thesis.**

Mode of Delivery: In person, Hybrid
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

APHD: Developmental Psychology and Education MEd

The Developmental Psychology and Education program offers studies leading to the MA, MEd, and PhD degrees. Students have an opportunity to construct an overall perspective on developmental psychology and human development and their implications for practice with children in educational and other applied settings. The Master of Education (MEd) program is designed for the reflective teacher or other practitioner in education or in any other field. This is a degree primarily designed for those working in applied settings and it does not include a research thesis.

Students take foundation courses in human development and research methodology. Elective courses cover a range of areas including cognitive, social, and emotional development; cognition and instruction (language, literacy, and mathematics); special education and adaptive instruction; program evaluation and mental health; advanced research methodology and evaluation.

The MEd program can be taken on a full-time or part-time basis.

Delivery options: Although not all elective courses are offered in each modality, students may be able to complete the MEd degree program through one of three delivery modes:

- in-person (students will mainly complete their coursework and other program requirements in-person, with up to one-third of their coursework online);
- hybrid (students will experience a mix of modes of engagement, with some of their coursework and other program requirements in-person and between one-third and two-thirds of their coursework online); and
- online (students will be able to complete all their coursework and other program requirements online) depending on their choice of emphases and elective courses.

Note: students should consult with their faculty advisor and/or graduate liaison officer regarding available options.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the department's additional admission requirements stated below.
- Admission to the MEd program normally requires an appropriate bachelor's degree with standing equivalent to a University of Toronto mid-B or better.
- Applicants normally have at least one year of relevant professional experience.

Completion Requirements

- **Coursework.** Students must complete **5.0 full-course equivalents (FCEs)** as follows:
  - APD1200H *Foundations of Human Development and Education*.
  - APD2293H *Interpretation of Educational Research.*
  - 2.0 additional FCEs must be selected from the department electives list, available on the departmental website or in the Applied Psychology and Human Development program guidelines.
  - The remaining 2.0 elective FCEs may be taken from within or outside the department. Elective courses must be chosen in consultation with the student's faculty advisor. Students are asked to meet with their faculty advisor in the first session of their program.

Mode of Delivery: In person, Online, Hybrid
Program Length: 4 sessions full-time (typical registration sequence: FWS-F); 10 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

APHD: Developmental Psychology and Education PhD

The Developmental Psychology and Education program offers studies leading to the MA, MEd, and PhD degrees. Students have an opportunity to construct an overall perspective on developmental psychology and human development and their implications for practice with children in educational and other applied settings.

Students take courses in human development and research methodology. Elective courses, chosen in consultation with their advisor, cover a range of areas including cognitive, social, and emotional development; cognition and instruction (language, literacy, and mathematics); special education and adaptive instruction; developmental neuroscience; advanced research methodology and evaluation; and early childhood policy and programs, including child care. The PhD program is designed for students wishing to pursue an academic or research-based career.

The Developmental Psychology and Education program offers both a full-time and a flexible-time PhD program option. Applicants must declare the option for which they are interested in applying. The flexible-time PhD degree program is designed to accommodate demand by practising professionals for a PhD degree that permits continued employment in areas related to their fields of research. Degree requirements for the full-time and flexible-time options are the same.

PhD students have the option of completing an emphasis in Early Learning. Please see details below.

Delivery options: Although not all elective courses are offered in each modality, students may be able to complete the PhD degree program through one of two delivery modes:

- in-person (students will mainly complete their coursework and other program requirements in-person, with up to one-third of their coursework online); and
- hybrid (students will experience a mix of modes of engagement, with some of their coursework and other program requirements in-person and between one-third and two-thirds of their coursework online) depending on their choice of elective courses.

Note: students should consult with their faculty advisor and/or graduate liaison officer regarding available options.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Applied Psychology and Human Development's additional admission requirements stated below.
- Normally, an appropriate bachelor's degree and a master's degree in developmental psychology and education, cognitive psychology, applied developmental psychology, or child study, with standing equivalent to a University of Toronto A– or better in the master's degree. Applicants with master's degrees in other disciplines such as adult education, anthropology, computer science, curriculum, philosophy, or a profession such as speech-language pathology, nursing, social work, physiotherapy, or occupational therapy may be eligible to apply for admission, but may have to complete additional courses to fulfil master's-level requirements equivalent to the MA in Developmental Psychology and Education. Students who have not completed a master's thesis will be required to submit a Qualifying Research Paper (QRP) prior to final admission to the program.
- Required letters of recommendation and a second academic letter of recommendation.

Completion Requirements

- **Coursework.** Students must complete **2.0 full-course equivalents (FCEs)** as follows:
  - APD3200H *Research Proseminar in Human Development and Applied Psychology*.
  - 0.5 FCE in statistics and research methods from an approved menu.
  - 1.0 FCE in electives (2 X 0.5 FCE).
  - The 2.0 FCEs are normally completed in Year 1 and should be chosen in consultation with the faculty advisor. Students who have an insufficient background in developmental psychology may have to complete additional courses.
- A **comprehensive examination**.
  - The purposes of the comprehensive examination are threefold:
    - To demonstrate the student's ability to work independently within an area of concern in human development.
    - To gain knowledge of a new area, a new technique or method in a specified area in human development.
    - To demonstrate the ability to integrate information at the accepted standard for a PhD student.
  - Students have two options when fulfilling their PhD comprehensive requirements:
    - Option 1: Empirical Research Paper or
    - Option 2: Internship.
- A **thesis and Doctoral Final Oral Examination**.
- Students must register continuously and pay the full-time fee until all degree requirements have been fulfilled.
- Students cannot transfer between the full-time and flexible-time PhD options.

Mode of Delivery: In person, Hybrid
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Flexible-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Applied Psychology and Human Development's additional admission requirements stated below.
- Normally, an appropriate bachelor's degree and a master's degree in developmental psychology and education, cognitive psychology, applied developmental psychology, or child study, with standing equivalent to a University of Toronto A- or better in the master's degree. Applicants with master's degrees in other disciplines such as adult education, anthropology, computer science, curriculum, philosophy, or a profession such as speech-language pathology, nursing, social work, physiotherapy, or occupational therapy may be eligible to apply for admission, but may have to complete additional courses to fulfil master's-level requirements equivalent to the MA in Developmental Psychology and Education. Students who have not completed a master's thesis will be required to submit a Qualifying Research Paper (QRP) prior to final admission to the program.
- Required letters of recommendation and a second academic letter of recommendation.
- Applicants to the flexible-time PhD option are accepted under the same admission requirements as applicants to the full-time PhD option.
- Applicants must demonstrate that they are currently employed and are active professionals engaged in activities relevant to their proposed program of study.

Completion Requirements

- **Coursework.** Students must complete **2.0 full-course equivalents (FCEs)** as follows:
  - APD3200H *Research Proseminar in Human Development and Applied Psychology*.
  - 0.5 FCE in statistics and research methods from an approved menu.
  - 1.0 FCE in electives (2 X 0.5 FCE).
  - The 2.0 FCEs are normally completed in Year 1 and should be chosen in consultation with the faculty advisor. Students who have an insufficient background in developmental psychology may have to complete additional courses.
- A **comprehensive examination**.
  - The purposes of the comprehensive examination are threefold:
    - To demonstrate the student's ability to work independently within an area of concern in human development.
    - To gain knowledge of a new area, a new technique or method in a specified area in human development.
    - To demonstrate the ability to integrate information at the accepted standard for a PhD student.
  - Students have two options when fulfilling their PhD comprehensive requirements:
    - Option 1: Empirical Research Paper or
    - Option 2: Internship.
- A **thesis and Doctoral Final Oral Examination**.
- Students must register continuously and pay the full-time fee until all degree requirements have been fulfilled. They must register full-time during the first four years and may continue as part-time thereafter, with their department's approval.
- Students cannot transfer between the full-time and flexible-time PhD options.

Mode of Delivery: In person, Hybrid
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

APHD: School and Clinical Child Psychology MA

The mission of the School and Clinical Child Psychology (SCCP) program is to provide students with theoretical, research, and professional training in preparation for leadership in psychological practice with children, adolescents, and families in school, mental health, private practice, and research settings. The program follows a scientist-practitioner model and is designed to train students to conduct basic and applied research and provide professional training in psychological assessment, therapy, and other psychosocial and instructional interventions, professional consultation, and prevention.

Opportunities are available for research and professional work with infants, young children, adolescents, adults, and families. The degrees are intended to meet the academic requirements of the College of Psychologists of Ontario (CPO) for registration as a Psychological Associate (MA) or Psychologist (PhD).

The curriculum of the SCCP program is designed to establish a strong foundation of core knowledge and skills early in the program, with students free to specialize later on. The program reflects a mix of courses and training opportunities.
A systemic approach is the basis for the training that is provided in assessment and intervention. The knowledge and skills necessary for the practice of school psychology and clinical child psychology overlap considerably, and experience in school and clinical settings complement and enhance each other. Therefore, over the course of the program of study, students are required to undertake practica in both school and clinical child settings.

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Applied Psychology and Human Development's additional admission requirements stated below.
- An appropriate bachelor's degree in psychology, defined as 6.0 full-course equivalents (FCEs) in psychology, including 0.5 FCE in child development and 1.0 FCE in research methods/statistics (of which at least 0.5 FCE must be at the third or fourth-year levels) and at least 3.0 FCEs at the second, third-, or fourth-year levels. The

usual admission standard is equivalency to a University of Toronto A– or better.
- Most applicants will have evidence of relevant professional experience and research experience.
- Applicants are requested to submit, in addition to two academic references, a letter of recommendation from an applied setting.

Completion Requirements

- **Coursework.** Students must complete **5.0 FCEs** (including a practicum course) and a thesis.
  - APD1205H *Ethical Issues in Applied Psychology*.
  - APD1215H *Psychological Assessment of School-Aged Children*.
  - APD1216H *Psychoeducational Assessment*.
  - APD1218H *Seminar and Practicum in School-Based Assessment, Consultation, and Intervention*. The practicum portion consists of 250 hours (one day a week from September to June) and is normally taken in a school setting.
  - APD1222H *Approaches to Psychotherapy-Lifespan*.
  - APD1236H *Developmental Psychopathology*.
  - APD1285H *Psychology and Education of Children and Adolescents with Learning Disabilities*.
  - JOI1288H *Intermediate Statistics and Research Design (RM)*.
  - 0.5 elective FCE.
  - 0.5 FCE in Cognitive/Affective bases of behaviour from an approved course listing. Note: Students who have a 1.0 FCE in Cognitive/Affective bases of behaviour at the senior undergraduate level approved by the program may substitute an elective course for this requirement or a course in the Biological Bases of Behaviour or Social Bases of Behaviour menus, or APD3204H, *Contemporary History and Systems in Human Development and Applied Psychology*.
- **Thesis.**
- A listing of approved Cognitive/Affective, Social, and Biological bases of behaviour courses is available from the department and in the Applied Psychology and Human Development program guidelines.
- In addition to the above course requirements, students who have not taken a previous child development course in their undergraduate degree program will be required to take APD1201H *Childhood and Adolescent Development*.
- Students who have not taken a previous statistics course or its equivalent must take JOI1287H *Introduction to Applied Statistics (RM)*.
- Students must achieve a minimum of A– in at least one of APD1215H *Psychological Assessment of School-Aged Children* and APD1216H *Psychoeducational Assessment*, and must complete APD1218H *Seminar and Practicum in School-Based Assessment, Consultation, and Intervention* in order to remain in good standing and be permitted to continue in the program.
- Failure to meet these criteria will normally result in a recommendation to the School of Graduate Studies to terminate the student's registration in the program.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

APHD: School and Clinical Child Psychology PhD

The mission of the School and Clinical Child Psychology (SCCP) program is to provide students with theoretical, research, and professional training in preparation for leadership in psychological practice with children, adolescents, and families in school, mental health, private practice, and research settings. The program follows a scientist-practitioner model and is designed to train students to conduct basic and applied research and provide professional training in psychological assessment, therapy, and other psychosocial and instructional interventions, professional consultation, and prevention.

Opportunities are available for research and professional work with infants, young children, adolescents, adults, and families. The degrees are intended to meet the academic requirements of the College of Psychologists of Ontario (CPO) for registration as a Psychological Associate (MA) or Psychologist (PhD).

The curriculum of the SCCP program is designed to establish a strong foundation of core knowledge and skills early in the program, with students free to specialize later on. The program reflects a mix of courses and training opportunities.

A systemic approach is the basis for the training that is provided in assessment and intervention. The knowledge and skills necessary for the practice of school psychology and clinical child psychology overlap considerably, and experience in school and clinical settings complement and enhance each other. Therefore, over the course of the program of study, students are required to undertake practica in both school and clinical child settings.

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Applied Psychology and Human Development's additional admission requirements stated below.
- Normally, an appropriate bachelor's degree in psychology or its equivalent and a University of Toronto MA in School and Clinical Child Psychology or its equivalent. The usual admission standard is equivalency to a University of Toronto A– or better in the master's degree. A limited number of outstanding applicants holding equivalent bachelor's and master's degrees in psychology from elsewhere may be considered. However, if the master's program was not equivalent to the University of Toronto MA in School and Clinical Child Psychology, the student will be required to take additional courses to receive equivalent training.
- Cognate course requirements. 1.0 full-course equivalent (FCE) at the senior undergraduate level, or 0.5 FCE at the graduate level, in each of the following cognate areas: Biological Bases of Behaviour, Cognitive/Affective Bases of Behaviour, Social Bases of Behaviour, and History and Systems of Psychology.

Completion Requirements

- Students must complete **5.5 FCEs**, including a doctoral practicum course and an internship course, as follows:
  - APD3202H *A Foundation of Program Evaluation in Social Sciences (RM)*.
  - APD3222H *Approaches to Psychotherapy with Children, Youth, and Families*, normally taken in Year 1.
  - APD3241H *Seminar and Practicum in Clinical Assessment and Intervention*, normally taken in Year 2. The practicum portion of APD3241H consists of 500 hours (two days a week from September to June) and is normally taken in a clinical setting. Students must complete APD3241H in order to remain in good standing and be permitted to continue in the program.
  - APD3260H *Psychodiagnostic Systems*.
  - APD5284Y *Assessment and Intervention with Culturally and Linguistically Diverse Children, Youth, and Families*.
  - 0.5 FCE from the Psychosocial Interventions course menu:
    - APD3224H *Advanced Proactive Behavioural and Cognitive-Behavioural Interventions** or
    - APD3231H *Psychodynamic Bases of Therapy**.

  * Note: the course is offered every other year. Students interested in other courses that may fulfil the Psychosocial Interventions requirement must receive approval from the SCCP Program Coordinator.
- 0.5 elective FCE.
- APD3240H *Advanced Social and Emotional Assessment Techniques* (0.5 FCE).
- APD3242Y *Internship in School and Clinical Child Psychology*. The internship consists of a 1,600-hour placement, normally taken on a full-time basis over the course of a year in the final year of the student's program.
- A **comprehensive examination**. The purpose of the SCCP comprehensive examination is to:
  - Ensure an adequate level of psychological knowledge for professional functioning as a practitioner, academic, and/or researcher.
  - Demonstrate an ability to integrate information at the accepted standard for a doctoral student.
- A **doctoral dissertation**.
- Students must have successfully completed all coursework, passed the comprehensive examination, and have their dissertation completed or well underway, prior to commencing their internship.
- For each missing **cognate course requirement** (see Cognitive/Affective, Social, or Biological Bases of Behaviour; Admission Requirements above), students are required to take a 0.5 FCE course from the applicable course menu. A listing of approved Cognitive/Affective, Social, or Biological Bases of Behaviour courses is available from the department and in the Applied Psychology and Human Development program guidelines. Students may use their elective course to cover one of these requirements.
- In addition to the above course requirements, students who have not taken a previous child development course must take APD1201H *Childhood and Adolescent Development*. Students who have not taken a previous statistics course or its equivalent must take JOI1287H *Introduction to Applied Statistics* (RM).
- Students must complete APD3241H *Seminar and Practicum in Clinical Assessment and Intervention* in order to remain in good standing and be permitted to continue in the program.
- Students who are required to take APD1215H, APD1216H, and APD1218H in addition to other courses in the PhD (which is the case for most students coming into the program from elsewhere) must achieve a minimum of A- in at least one of APD1215H *Psychological Assessment of School-Aged Children* and APD1216H *Psychoeducational Assessment*, and must complete APD1218H *Seminar and Practicum in School-Based Assessment, Consultation, and Intervention* in order to remain in good standing and be permitted to continue in the program. Failure to meet these criteria will normally result in a recommendation to the School of Graduate Studies to terminate the student's registration in the program.
- Students must register continuously and pay the full-time fee until all degree requirements have been fulfilled.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

APHD: Applied Psychology and Human Development: Emphases

Early Learning

Participating Programs:

- Developmental Psychology and Education PhD

Admissions to this emphasis have been administratively suspended.

Students interested in the Early Learning emphasis should consult with the Graduate Coordinator.

- Students wishing to complete the emphasis in Early Learning will include the following courses (**2.0 full-course equivalents [FCEs]**) in their overall PhD program:
  - APD3200H *Researching Proseminar in Human Development and Applied Psychology*.
  - APD3273H *Researching Early Learning*: an overview course of quantitative and qualitative methodology which meets the requirements of an intermediate or higher-level statistics course required of all Developmental Psychology and Education students).
  - APD1211H *Psychological Foundations of Early Development and Education*.
  - APD3274H *Early Learning and Thesis Development*.

Early Learning and Early Years

Participating Programs:

- Child Study and Education EdD

This emphasis will allow students to take specialized courses which address social emotional wellbeing in the early years. This emphasis is designed to help students gain a deeper understanding and expertise in early learning and early years while also integrating their knowledge and understanding of special education, security, and child and youth wellbeing.

- **Coursework.** From the following course list, EdD students must successfully complete **1.0 full-course equivalent (FCE)**, which is counted towards the total FCEs required for the student's degree program:
  - APD1211H, APD1249H, APD1272H, APD1280H, APD1286H.

Upon successful completion of the emphasis requirements and degree requirements, students may make a request to the CSE Program Administrator to have the emphasis noted on the student transcript. This request must be made before graduation. A course can only be applied to the requirements of a single emphasis.

Mental Health and Wellbeing

Participating Programs:

- Child Study and Education EdD

This emphasis will allow students to take specialized courses which address the mental health of children and/or youth in various settings including the classroom as well as delve into issues of risk and resilience and culture. This emphasis is designed to help students gain a deeper understanding of and expertise in special education, security, and child and youth wellbeing.

- **Coursework.** From the following course list, EdD students must successfully complete **1.0 full-course equivalent (FCE)**, which is counted towards the total FCEs required for the student's degree program:
  - APD1236H, APD1256H, APD1279H, APD1295H, APD1297H, APD3221H.

Upon successful completion of the emphasis requirements and degree requirements, students may make a request to the CSE Program Administrator to have the emphasis noted on the student transcript. This request must be made before graduation. A course can only be applied to the requirements of a single emphasis.

Program Evaluation

Participating Programs:

- Developmental Psychology and Education MEd

Within the MEd program in Developmental Psychology and Education, the emphasis in Program Evaluation is designed to engage students in an exploration of program evaluation used in education, psychology, and the social sciences. Program evaluation is a systematic analysis of the process, effectiveness, and outcomes of programs whose primary purpose is to assess what components of a program are or are not working, and why.

Students will learn the concepts and theories needed to critically review evaluation designs and how to develop the core components of program evaluation proposals and reports. As such, students will develop the basic competencies needed for program evaluation, including the ability to: critically appraise evaluation research; assess program needs; develop a logic model; evaluate the processes and outcomes of a program; evaluate program efficiency; weigh ethical issues; warrant evaluation claims; and communicate with interested parties. Furthermore, students will also learn how social, cultural, and political factors impact program evaluation.

Program Requirements

Coursework. Students must successfully complete a total of **1.5 full-course equivalents (FCEs)**, which are counted towards the total FCEs required for the student's degree program, as follows: 1.0 FCE from the Program Evaluation menu **and** 0.5 FCE from the Research Methods menu, listed below.

- Program Evaluation menu (1.0 FCE from the following, which must include at least one of APD1212H and/or APD3202H):
  - APD1212H *Basics to Program Evaluation in Social Sciences.*
  - APD1250H *Program Evaluation Practicum.*
  - APD1292H *Instrument Design and Analysis (RM).*
  - APD3202H *A Foundation of Program Evaluation in Social Sciences (RM).*
  - APD3305H *Systems and Organizational Change.*
- Research Methods menu (0.5 FCE from the following):
  - APD1210H *Research Practicum.*
  - APD3201H *Qualitative Research Methods in Human Development and Applied Psychology (RM).*
  - JOI1287H *Introduction to Applied Statistics (RM).*
  - JOI1288H *Intermediate Statistics and Research Design (RM).*
  - JOI3043H *Development and Use of Surveys in Education Research (RM).*
  - JOI3048H *Intermediate Statistics in Educational Research: Multiple Regression Analysis (RM).*
  - JOI3228H *Mixed Methods Research Design in Social Sciences (RM).*

Upon successful completion of the emphasis requirements and successful completion of the degree requirements, students may make a request to the MEd Developmental Psychology and Education Program Liaison to have the emphasis noted on their transcript. This request must be made before graduation.

Special Education

Participating Programs:

- Child Study and Education EdD

This emphasis will allow students to take specialized courses that delve into specific domains of special education.

This emphasis is designed to help students gain a deeper understanding of and expertise in special education while also considering issues pertaining to security and child and youth wellbeing.

- **Coursework.** From the following course list, EdD students must successfully complete **1.0 full-course equivalent (FCE**), which is counted towards the total FCEs required for the student's degree program:
  - APD1271H, APD1285H, APD1296H, APD2275H, APD2296H.

Upon successful completion of the emphasis requirements and degree requirements, students may make a request to the CSE Program Administrator to have the emphasis noted on the student transcript. This request must be made before graduation. A course can only be applied to the requirements of a single emphasis.

APHD: Child Study and Education MA Courses

Year 1 Required Courses

Course Code	Course Title
APD1226H	Foundations in Inquiry and Data-Based Decision Making
APD2200Y	Child Study and the Science of Learning
APD2201Y	Education Seminar I: Professional Practice, Critical Pedagogies, and Social Studies
APD2210Y	Introduction to Curriculum I: Core Areas
APD2220Y	Teaching Practicum
APD2270Y	Adaptive Instruction: Students, Systems, and Supports
Plus	Three elective half courses to be completed during the Spring/Summer session.
Plus	Full-year religious education course (if interested in teaching in the Roman Catholic separate school board). This course does not count towards the Child Study and Education program requirements. There is a separate fee. Students interested in this option should contact the OISE Continuing and Professional Learning Office for course enrolment information.

Note: Students without an undergraduate course credit in child development must take APD1201H *Child and Adolescent Development* as one of their electives.

Year 2 Required Courses

Registration in Year 2 is contingent upon successful completion of all Year 1 work.

Academic Session

Course Code	Course Title
APD2211H	Language and Literacy: Understanding, Assessment, and Instruction
APD2212H	Mathematics Learning and Instruction
APD2214H	Arts Curriculum and Critical Pedagogies for Cross-Curricular Teaching
APD2222H	Professional Practice: Enacting a Research-Informed Learning Cycle
APD2223H	Professional Practice: Developing the Skills of Critical Friendship

Internship Session

Course Code	Course Title
APD2202H	Education Seminar II: Current Issues in Teaching and Learning
APD2221Y	Teaching Internship

In addition, students must demonstrate knowledge of the Acts and Regulations respecting education in Ontario (addressed in APD2202H).

French as a Second Language Qualification Courses

- Eligible students registered in the Primary/Junior division who, in addition to an Ontario Teachers' Certificate of Qualification, wish to pursue the French as a Second Language (FSL) qualification, must successfully complete the following requirements:
  - Pass an OISE French Proficiency Test prior to completing the following two courses.
  - Complete both CTL7200H *Curriculum and Teaching in French as a Second Language — Primary/Junior* and CTL3204H *L'immersion française: enseignement et recherches* within the elective space.
  - Complete one practicum placement in a French classroom following successful completion of the French Proficiency Test and both CTL7200H and CTL3204H.

Recommended Elective Courses

Depending on their career goals, students may wish to select courses and placements to focus on particular areas:

Special Education

Students planning a career in special needs education may consider Special Education as a focused area of study. Such students are strongly encouraged to complete two recommended Special Education electives beyond their core foundation course (APD2270Y).

Early Childhood

Students interested in kindergarten programs may consider Early Childhood as a focused area of study. Such students are strongly encouraged to complete one or more recommended Early Childhood elective course plus an internship in a kindergarten class.

Course List

Not all courses are offered every year. Please review the course schedule on the Registrar's Office and Student Experience website.

Course Code	Course Title
APD1201H	Child and Adolescent Development
APD1209H	Research Methods and Thesis Preparation in AP&HD
APD1211H	Psychological Foundations of Early Development and Education
APD1217H	Foundations of Proactive Behavioural and Cognitive-Behavioural Intervention in Children
APD1226H	Foundations in Inquiry and Data-Based Decision Making
APD1249H	Social-Emotional Development and Applications
APD1256H	Child Abuse: Intervention and Prevention
APD1258H	Spatial Thinking and STEAM Education
APD1271H	Perspectives on Executive Functions in Education: From Theory to Practice
APD1272H	Play and Education
APD1276H	Maximizing Learning: Understanding How Individuals and Groups Learn Best
APD1280H	Symbolic Development and Learning
APD1286H	Foundations of Literacy Development for School Age Children
APD1294H	Technology, Psychology, and Play
APD1296H	Assessing School-Aged Language Learners
APD1298H	Imagination, Reasoning, and Learning
APD2001Y	Major Research Paper
APD2200Y	Child Study and the Science of Learning
APD2201Y	Education Seminar I: Professional Practice, Critical Pedagogies, and Social Studies
APD2202H	Education Seminar II: Current Issues in Teaching and Learning
APD2210Y	Introduction to Curriculum I: Core Areas
APD2211H	Language and Literacy: Understanding, Assessment, and Instruction
APD2212H	Mathematics Learning and Instruction
APD2214H	Arts Curriculum and Critical Pedagogies for Cross-Curricular Teaching
APD2220Y	Teaching Practicum
APD2221Y	Teaching Internship
APD2222H	Professional Practice: Enacting a Research-Informed Learning Cycle
APD2223H	Professional Practice: Developing the Skills of Critical Friendship
APD2232H	Consultation Skill Development for Educators
APD2270Y	Adaptive Instruction: Students, Systems, and Supports
APD2275H	Technology for Adaptive Instruction and Special Education
APD2293H	Interpretation of Educational Research
APD2296H	Reading and Writing Difficulties
APD3303H	Advanced Study of Tools and Research Methods for Investigating Problems of Practice: Data-Driven Research for Decision-Making
APD3305H	Systems and Organizational Change
APD5000H to APD5050H	Special Topics in Applied Psychology and Human Development: Master's Level
APD6000H to APD6016H	Special Topics in Applied Psychology and Human Development: Doctoral Level

Individual Reading and Research Courses

Course Code	Course Title
APD2252H	Individual Reading and Research in Human Development and Applied Psychology: Master's Level

APHD: Child Study and Education EdD Courses

Course Code	Course Title
APD3201H	Qualitative Research Methods in Human Development and Applied Psychology (RM)
APD3202H	A Foundation of Program Evaluation in Social Sciences (RM)
APD3301H	Issues in Child Study and Education: Research, Policy, and Problems of Practice (RM)
APD3302H	Advanced Study of Critical Issues in Special Education, Mental Health, and Child Security
APD3303H	Advanced Study of Tools and Research Methods for Investigating Problems of Practice: Data-Driven Research for Decision-Making
APD3304H	Research Proposal Development (RM)
APD3305H	Systems and Organizational Change
JOI1288H	Intermediate Statistics and Research Design (RM)
JOI3228H	Mixed Methods Research Design in Social Sciences (RM)

APHD: Counselling and Clinical Psychology MA and PhD; Field: Clinical and Counselling Psychology Courses

Not all courses are offered every year. Please review the course schedule on the Registrar's Office and Student Experience website.

Course Code	Course Title
APD1202H	Theories and Techniques of Counselling and Psychotherapy — Part I
APD1203Y	Practicum I: Interventions in Counselling Psychology and Psychotherapy
APD1208Y	Cognitive and Personality Theory and Assessment
APD1219H	Ethical Issues in Professional Practice in Psychology and Psychotherapy
APD1228H	Couples Counselling
APD1260H	Family Therapy
APD1261H	Group Work in Counselling and Psychotherapy
APD1263H	Research Methods for Clinical and Counselling Psychology (RM)
APD1267H	Emotion-Focused Therapy
APD1270H	Trauma Informed Interventions
APD3202H	A Foundation of Program Evaluation in Social Sciences (RM)
APD3204H	Contemporary History and Systems in Human Development and Applied Psychology
APD3215H	Advanced Psychotherapy Seminar
APD3217Y	Advanced Practicum in Clinical and Counselling Psychology
APD3225H	Assessment and Diagnosis of Personality and Psychopathology
APD3260H	Psychodiagnostic Systems
APD3261H	Clinical Supervision and Consultation Practicum
APD3268Y	Internship in Clinical and Counselling Psychology
APD5000H to APD5050H	Special Topics in Applied Psychology and Human Development: Master's Level
APD6000H to APD6016H	Special Topics in Applied Psychology and Human Development: Doctoral Level
JOI1287H	Introduction to Applied Statistics (RM)
JOI1288H	Intermediate Statistics and Research Design (RM)
JOI3048H	Intermediate Statistics in Educational Research: Multiple Regression Analysis (RM)

Individual Reading and Research Courses

Course Code	Course Title
APD2252H	Individual Reading and Research in Human Development and Applied Psychology: Master's Level
APD3252H	Individual Reading and Research in Human Development and Applied Psychology: Doctoral Level

APHD: Counselling Psychology MEd and EdD; Fields: Counselling and Psychotherapy; Global Mental Health and Counselling Psychology; Guidance and Counselling; School Psychology Courses

Not all courses are offered every year. Please review the course schedule on the Registrar's Office and Student Experience website.

Course Code	Course Title
APD1202H	Theories and Techniques of Counselling and Psychotherapy — Part I
APD1203Y	Practicum I: Interventions in Counselling Psychology and Psychotherapy
APD1207H	Counselling Topics in Sexual Orientation and Gender Identity Diversity
APD1214H	Critical Multicultural Practice: Diversity Issues in Counselling and Psychotherapy
APD1219H	Ethical Issues in Professional Practice in Psychology and Psychotherapy
APD1228H	Couples Counselling
APD1229H	Fostering Black Mental Health from Childhood to Emerging Adulthood Through Anti-Racist Practices
APD1232H	Mindfulness Interventions in Counselling and Psychotherapy
APD1235H	Technology, Play, and Social Media in Adolescence
APD1245H	Brief Strategies in Counselling and Psychotherapy
APD1247H	Practicum in Adult Counselling and Psychotherapy
APD1252H	Individual Reading and Research in Counselling Psychology: Master's Level
APD1260H	Family Therapy
APD1261H	Group Work in Counselling and Psychotherapy
APD1262H	Educational and Psychological Testing for Counselling
APD1266H	Career Counselling and Development: Transition from School to Work
APD1267H	Emotion-Focused Therapy
APD1268H	Career Counselling and Development: Transitions in Adulthood
APD1270H	Trauma Informed Interventions
APD1271H	Perspectives on Executive Functions in Education: From Theory to Practice
APD1277H	Global Indigenous Healing in Counselling and Psychotherapy
APD1278H	Cognitive Therapy
APD1282H	Introduction to Global Mental Health and Counselling Psychology
APD1283H	Peer and Video-Based Counselling with Practicum Field-Based Learning in Global Mental Health
APD1290H	Indigenous Studies in Mental Health and Disability Justice
APD1302H	Theories and Techniques of Counselling and Psychotherapy — Part II
APD1902H	Theories and Techniques of Counselling in a Global Context
APD2286H	Global Indigenous Healing in Counselling and Psychotherapy
APD2291H	Introduction to Global Mental Health and Counselling Psychology
APD2293H	Interpretation of Educational Research
APD2298H	Peer and Video-Based Counselling with Practicum Field-Based Learning in Global Mental Health
APD3115H	Research Proseminar in Counselling and Psychotherapy
APD3116H	Proseminar II: Practice-Based Research in School and Counselling Psychology
APD3160H	Advanced Family Therapy
APD3163H	Advanced Multicultural Counselling and Psychotherapy
APD3178H	Advanced Cognitive Behaviour Therapy
APD3202H	A Foundation of Program Evaluation in Social Sciences (RM)
APD3215H	Advanced Psychotherapy Seminar
APD3217Y	Advanced Practicum in Clinical and Counselling Psychology
APD3260H	Psychodiagnostic Systems
APD3261H	Clinical Supervision and Consultation Practicum
APD3268Y	Internship in Clinical and Counselling Psychology
APD3270H	EdD Internship
APD3271H	Additional PhD Practicum

Course Code	Course Title
APD3401H	Assessment with Culturally and Linguistically Diverse Children, Youth, and Families
APD3402H	Intervention with Culturally and Linguistically Diverse Children, Youth, and Families
APD3403H	EdD Internship in School Psychology
APD5000H to APD5050H	Special Topics in Applied Psychology and Human Development: Master's Level
APD6000H to APD6016H	Special Topics in Applied Psychology and Human Development: Doctoral Level
JOI3228H	Mixed Methods Research Design in Social Sciences (RM)
JOI3229H	Meta-Analysis for Research in Psychology and Education (RM)
JOI6000H	Advanced Quantitative Research Methods Courses

Individual Reading and Research Courses

Course Code	Course Title
APD2252H	Individual Reading and Research in Human Development and Applied Psychology: Master's Level
APD3252H	Individual Reading and Research in Human Development and Applied Psychology: Doctoral Level

APHD: Developmental Psychology and Education MA, MEd, and PhD Courses

Not all courses are offered every year. Please review the course schedule on the Registrar's Office and Student Experience website.

Course Code	Course Title
APD1200H	Foundations of Human Development and Education
APD1201H	Child and Adolescent Development
APD1206H	Mind, Brain, and Instruction
APD1209H	Research Methods and Thesis Preparation in Human Development and Applied Psychology
APD1210H	Research Practicum (RM)
APD1211H	Psychological Foundations of Early Development and Education
APD1212H	Basics to Program Evaluation in Social Sciences
APD1213H	Psychology and Education of Students with ADHD
APD1217H	Foundations of Proactive Behavioural and Cognitive-Behavioural Intervention in Children
APD1230H	Well-being and Education
APD1231H	Mindful Self-Compassion for Educators
APD1233H	Cognitive Development and Applications
APD1235H	Technology, Play, and Social Media in Adolescence
APD1236H	Developmental Psychopathology
APD1241H	Outcomes of Early Education and Child Care
APD1249H	Social-Emotional Development and Applications
APD1250H	Program Evaluation Practicum
APD1256H	Child Abuse: Intervention and Prevention
APD1257H	Child Development and Personal History
APD1258H	Spatial Thinking and STEAM Education
APD1271H	Perspectives on Executive Functions in Education: From Theory to Practice
APD1272H	Play and Education
APD1273H	Psychology and Education of Children and Adolescents with Autism Spectrum Disorder
APD1274H	Learning to Learn: Bridging Theory and Practice
APD1276H	Maximizing Learning: Understanding How Individuals and Groups Learn Best
APD1280H	Symbolic Development and Learning
APD1281H	Education Exceptionalities, Special Education, and Adaptive Instruction
APD1285H	Psychology and Education of Children and Adolescents with Learning Disabilities
APD1286H	Foundations of Literacy Development for School Age Children
APD1290H	Indigenous Studies in Mental Health and Disability Justice
APD1292H	Instrument Design and Analysis (RM)
APD1294H	Technology, Psychology, and Play
APD1295H	Adolescent Mental Health: An Examination of Risk and Resilience
APD1296H	Assessing School-Aged Language Learners

Course Code	Course Title
APD1297H	Mental Health in the Classroom: How Educators Can Help Our Most Vulnerable Students
APD1298H	Imagination, Reasoning, and Learning
APD2275H	Technology for Adaptive Instruction and Special Education
APD2293H	Interpretation of Educational Research
APD2296H	Reading and Writing Difficulties
APD3200H	Research Pro-seminar in Human Development and Applied Psychology
APD3201H	Qualitative Research Methods in Human Development and Applied Psychology (RM)
APD3202H	A Foundation of Program Evaluation in Social Sciences (RM)
APD3209H	Applied Machine Learning (RM)
APD3305H	Systems and Organizational Change
APD5000H to APD5050H	Special Topics in Applied Psychology and Human Development: Master's Level
APD6000H to APD6016H	Special Topics in Applied Psychology and Human Development: Doctoral Level
JOI1287H	Introduction to Applied Statistics (RM)
JOI1288H	Intermediate Statistics and Research Design (RM)

Individual Reading and Research Courses

Course Code	Course Title
APD2252H	Individual Reading and Research in Human Development and Applied Psychology: Master's Level
APD3252H	Individual Reading and Research in Human Development and Applied Psychology: Doctoral Level

APHD: School and Clinical Child Psychology MA and PhD Courses

Not all courses are offered every year. Please review the course schedule on the Registrar's Office and Student Experience website.

Course Code	Course Title
APD1205H	Ethical Issues in Applied Psychology
APD1207H	Counselling Topics in Sexual Orientation and Gender Identity Diversity
APD1215H	Psychological Assessment of School-Aged Children
APD1216H	Psychoeducational Assessment
APD1217H	Foundations of Proactive Behavioural and Cognitive-Behavioural Intervention in Children
APD1218H	Seminar and Practicum in School-Based Assessment, Consultation, and Intervention
APD1222H	Approaches to Psychotherapy-Lifespan
APD1228H	Couples Counselling
APD1233H	Cognitive Development and Applications
APD1236H	Developmental Psychopathology
APD1245H	Brief Strategies in Counselling and Psychotherapy
APD1251H	Reading in a Second Language
APD1256H	Child Abuse: Intervention and Prevention
APD1257H	Child Development and Personal History
APD1271H	Perspectives on Executive Functions in Education: From Theory to Practice
APD1285H	Psychology and Education of Children and Adolescents with Learning Disabilities
APD1290H	Indigenous Studies in Mental Health and Disability Justice
APD1291H	Addictive Behaviours: Approaches to Assessment and Intervention
APD1295H	Adolescent Mental Health: An Examination of Risk and Resilience
APD3202H	A Foundation of Program Evaluation in Social Sciences (RM)
APD3204H	Contemporary History and Systems in Human Development and Applied Psychology
APD3221H	Cross-Cultural Perspectives on Children's Problems
APD3222H	Approaches to Psychotherapy with Children, Youth, and Families
APD3224H	Advanced Proactive Behavioural and Cognitive-Behavioural Interventions
APD3231H	Psychodynamic Bases of Therapy
APD3240H	Advanced Social and Emotional Assessment Techniques
APD3241H	Seminar and Practicum in Clinical Assessment and Intervention

Course Code	Course Title
APD3242Y	Internship in School and Clinical Child Psychology
APD3243H	Additional PhD Practicum in Assessment and Intervention
APD3260H	Psychodiagnostic Systems
APD3286H	Developmental Neuropsychology
APD5000H to APD5050H	Special Topics in Applied Psychology and Human Development: Master's Level
APD6000H to APD6016H	Special Topics in Applied Psychology and Human Development: Doctoral Level
APD5284Y	Assessment and Intervention with Culturally and Linguistically Diverse Children, Youth, and Families
JOI1287H	Introduction to Applied Statistics (RM)
JOI1288H	Intermediate Statistics and Research Design (RM)

Individual Reading and Research Courses

Course Code	Course Title
APD2252H	Individual Reading and Research in Human Development and Applied Psychology: Master's Level
APD3252H	Individual Reading and Research in Human Development and Applied Psychology: Doctoral Level

Architecture, Landscape, and Design

Architecture, Landscape, and Design: Introduction

Faculty Affiliation

Architecture, Landscape, and Design

Degree Programs

Architecture

MArch

Architecture, Landscape, and Design

PhD

Landscape Architecture

MLA

Urban Design

MUD

Visual Studies

MVS

- Fields:
  - Curatorial Studies;
  - Studio

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Environmental Studies**
  - Architecture, Landscape, and Design, PhD
  - Landscape Architecture, MLA
- **Environment and Health**
  - Architecture, Landscape, and Design, PhD
  - Landscape Architecture, MLA
- **Knowledge Media Design**
  - Architecture, MArch
  - Landscape Architecture, MLA
  - Urban Design, MUD
- **Sexual Diversity Studies**
  - Visual Studies, MVS

Overview

The Faculty of Architecture, Landscape, and Design offers professional graduate programs in areas characterized by exceptional change. Globalization and the convergence of new media, new materials, and new building technologies have led to significant economic, technological, and aesthetic shifts. As a leading school of architecture, landscape, forestry, and design in North America, the Faculty is responding to these changing realities.

The greater Toronto region serves as a dynamic laboratory for critical studies and the exploration of design alternatives of international significance. Students also have access to Toronto's large professional design community. Students and faculty are incredibly cosmopolitan in sensibility, hailing from every part of the world, with their work crossing geographic and cultural boundaries. The city's multicultural networks and international connections make the Faculty a powerful place to start a career.

The Faculty has grown exceptionally in recent years with the hiring of new faculty and the revamping of its master's programs. With architecture, landscape architecture, forestry, urban design, and visual studies sharing facilities, the Faculty benefits from rich collaborations and crossover between related disciplines.

The growth has led to the recent construction of a new building which doubles the Faculty's size and creates a new and unprecedented centre at the University of Toronto for education, research, and public outreach on architecture, urbanism, visual arts, landscape, and conservation.

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John H. Daniels Faculty of Architecture, Landscape, and Design
University of Toronto, 1 Spadina Crescent
Toronto, Ontario M5S 2J5
Canada

Architecture, Landscape, and Design: Graduate Faculty

Full Members

Anderson, Christy - BA, MA, PhD
Cassils, Heath - BFA, MFA

Chaouni, Aziza - BScCE, MArch
Chung, Daniel Haeyoung - BA, MArch, PhD
Clarke, Joseph - BSc, MPH, MArch, PhD
Du, Juan - MArch, DSc ***(Dean)***
Farhat, Georges - MArch, PhD
Harwood, John - PhD
Jakubiec, Alstan - BArch, MArch, DPhil
Kesik, Ted - BASc, MASc, DPhil
Khemet, Bomani Ajamu - BASc, MEng, MBSc, PhD
Levit, Robert - BA, March ***(Acting Dean)***
Liu, An Te - BA, MArch
Lloyd, Sue - BA, MFA
Lobsinger, Mary Lou - BArch, BES, BA, PhD
Margolis, Liat - BFA, MLA
Masoud, Fadi - BES, MLA
McCarney, Patricia - BA, MCP, PhD
Nguyen, Jason - BArch, MA, PhD
North, Alissa - BLA, MLA
Peters, Brady - BS, BES, MArch, PhD
Shim, Brigitte - BES, BArch
Sommer, Richard - BFA, BArch, MArch
Stankievech, Charles - BA, MFA
Thomas, Sean - BA, PhD
Verderber, Stephen - BSc, AA, MArch, PhD
White, Mason - BArch, MArch
Williamson, Shane - BSc, MArch
Wolff, Jane - AB, MLA
Wright, Robert - BSc, MLA
Yablonina, Maria - MSc, PhD
Yousefpour, Rasoul - BSc, MSc, PhD
Zimmerman, Claire - BA, MArch, PhD

Associate Members

Akiyama, Mitchell - BFA, MFA, PhD
Babasikas, Petros - BArch, BA, MArch
Bierig, Aleksandr - BArch, MArch
Blas, Zachary - BS, MFA, PhD
Boigon, Brian - BArch
Cruz, Patrick - BFA, BFA, MFA
Denegri, Maria - BA, BArch
Fischer, Barbara - BFA, MA
Fong, Steven - BArch, MArch
Fortin, David Terrance - BA, MArch, PhD
Hlady, Marla - BFA, MFA
Hupfield, Maria - BA, MFA
Ibelings, Johannes - MA
Jacob, Luis - BA
Kim, Jeannie - AB, MA, MArch ***(Associate Dean, Academic)***
Kraven, Karen - BFA, MFA
Kubey, Karen Louise - BArch, MArch
Kwan, Will - BA, MFA
Lukachko, Alex - BES, MArch
Lum, Morris - BFA, BA
Macgillivray, James - AB, MArch
Martire, Francesco - MArch
Mazinani, Sanaz - BA, PhD
Miller, Laura J. - BA, MArch
Moukheiber, Carol Leila - BArch, BA
North, Peter - BLA, MLA
Osahor, Emmanuel - BFA, MFA
Petricone, Pina - MArch
Phiffer, Adrian - BArch, MArch UD
Puric-Mladenovic, Danijela - PhD
Quiros Pacheco, Mauricio - MArch UD
Robayo Sheridan, Sarah - AM
Shelley, Elise - BSc, MArch, MLA
Shnier, John - BArch, BES
Stevens, Sara - PhD
Town, Chloe - BA, March

Architecture, Landscape, and Design: Architecture MArch

The Master of Architecture (MArch) is a professional degree program and provides a thorough base of knowledge in history, theory, technology, ecology, society, and professional practice, while developing skills in design through an intensive sequence of design studio courses. These are supported by courses in visual communication and architectural representation including computer modelling and other new media. The program aims to develop critical, creative, and independent thinking and research that responds to current design issues and societal changes. The greater Toronto region is used as an urban laboratory for the development of new knowledge and forms of practice.

In Canada, the Canadian Architectural Certification Board (CACB) is the sole agency authorized by the Canadian Architectural Licensing Authorities (CALA) to accredit Canadian professional degree programs in architecture for the purposes of architectural licensure.

The **3-year option** within the MArch program is accredited by the Canadian Architectural Certification Board. Graduates are eligible to begin the process of professional licensure to become an Architect in North America. The qualification is also transferable to many other countries and regions; students are advised to inquire with their local licensing body.

The **2-year option** within the MArch program is accredited by the Canadian Architectural Certification Board. Graduates are eligible to begin the process of professional licensure to become an Architect in North America. The qualification is also transferable to many other countries and regions; students are advised to inquire with their local licensing body.

The **1-year option** within the MArch program is ideal for those who wish to undertake a graduate-level, academic research project, and independent of the pathway to professional licensure. Those who wish to become a licensed Architect should consider the 2- or 3-year program options above.

MArch Program (3-Year Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Architecture, Landscape, and Design's additional admission requirements stated below.
- A bachelor's degree (BA, BSc, BASc, BES, BFA, BCom) with a final-year grade point average of at least mid-B.
- Recommended: courses in secondary calculus, secondary physics, and university-level architectural history (0.5 full-course equivalent [FCE]).
- Some preparation or experience in architectural design or the creative arts is encouraged, but not required, such as hand or digital drawing, film or animation, graphic design, or sculpture. This program is suitable for those without

formal training in design or the arts; graduates of any discipline are encouraged to apply.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

- The course of study is a rigorous full-time, comprehensive program and prepares graduates for the full range of professional activities in architecture. The core program is extensive, and students are required to use their electives to develop an area of special skill and knowledge through an independent study program that culminates in a design thesis.
- Students study full-time, taking all required courses in each given session. An FZ (fail) in any one course, or a B– grade in two studio courses or in any three courses normally results in a recommendation to the School of Graduate Studies to terminate the student's registration in the degree program.
- There is no additional language requirement other than proficiency in English on admission. Writing support is integrated into the program to develop specialized skills that are essential to effective learning and communication in the design fields.
- Progress in the program is dependent upon satisfactory completion of studio and required core courses in sequence. Exceptions can be made at the discretion of the Program Director, and in consultation with the Office of the Registrar and Student Services in the case of accessibility.
- Students who complete their Master of Architecture program and are eligible to graduate will have their relevant information automatically forwarded by the John H. Daniels Faculty of Architecture, Landscape, and Design to the Canadian Architectural Certification Board (CACB), unless the student opts out in writing. The certification confirms the individual's academic qualifications in compliance with the Canadian Education Standard (CES) in Architecture for entry to the profession. CACB grants and issues certification to applicants who meet the Education Standard and maintains a National Register of those certified and confidential records of all pertinent documentation for all applicants.
- **Coursework.** Students must complete a total of **16.0 full-course equivalents (FCEs)** as follows:
  - 14.0 FCEs in core courses:
    - 4.0 FCEs: Design Studio
      - ARC1011Y *Architectural Design Studio 1*
      - ARC1012Y *Architectural Design Studio 2*
      - ARC2013Y *Architectural Design Studio 3*
      - ARC2014Y *Architectural Design Studio 4*
    - 1.0 FCE: Option Studio
      - ARC3015Y *Option Studio* or
      - LAN3016Y *Design Studio Options* or
      - URD2013Y *Urban Design Studio Options*
    - 1.0 FCE: Thesis Studio
      - ARC3021Y *Thesis Studio*
    - 1.0 FCE: Research Methods
      - ARC2017H *Research Methods*
      - ARC3018H *Thesis Research Seminar*
    - 0.5 FCE: Visual Communications
      - ARC1021H *Visual Communications 1*
    - 1.0 FCE: History
      - ARC1031H *Historical Perspectives on Topics in Architecture 1*
      - ARC1032H *Historical Perspectives on Topics in Architecture 2*
    - 1.0 FCE: Design Technology
      - ARC1022H *Design Technology 1*
      - ARC2023H *Design Technology 2*
    - 3.5 FCEs: Technics and Planning
      - ARC1041H Building Science, Materials, and Construction 1
      - ARC1043H Building Science, Materials, and Construction 2
      - ARC1046H Structures 1
      - ARC2042H Site Engineering and Ecology
      - ARC2046H Structures 2
      - ARC2047H Building Science, Materials, and Construction 3
      - ARC2048H Building Science, Materials, and Construction 4
    - 1.0 FCE: Professional Practice
      - ARC3051H *Professional Practice 1*
      - ARC3052H *Professional Practice 2*.
  - 2.0 elective FCEs, of which 0.5 FCE must be in the History and Theory category.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FW-FW-FW)
Time Limit: 4 years full-time

MArch Program (2-Year: Second-Year Advanced-Standing Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Architecture, Landscape, and Design's additional admission requirements stated below.
- An appropriate non-professional bachelor's degree in architectural studies or environmental design, or a comparable degree focusing on the built environment.
- Admission to the advanced-standing option is based on the merits of the student's overall academic background and strength of design portfolio as evaluated by the MArch admissions committee.
- Required: minimum previous completion of
  - four design studio courses
  - one course in visual communications or representation
  - one course in design technology
  - two courses in architecture history and theory (one in 20th-century)
  - one course in structures
  - one course in building science
  - one course in environmental systems.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

- The course of study is a rigorous full-time, comprehensive program and prepares graduates for the full range of professional activities in architecture. The core program is extensive, and students are required to use their electives to develop an area of special skill and knowledge through an independent study program that culminates in a design thesis.
- Students study full-time, taking all required courses in each given session. An FZ (fail) in any one course, or a B– grade in two studio courses or in any three courses normally results in a recommendation to the School of Graduate Studies to terminate the student's registration in the degree program.
- There is no additional language requirement other than proficiency in English on admission. Writing support is integrated into the program to develop specialized skills that are essential to effective learning and communication in the design fields.
- Progress in the program is dependent upon satisfactory completion of studio and required core courses in sequence. Exceptions can be made at the discretion of the Program Director, and in consultation with the Office of the Registrar and Student Services in the case of accessibility.
- Students who complete their Master of Architecture program and are eligible to graduate will have their relevant information automatically forwarded by the John H. Daniels Faculty of Architecture, Landscape, and Design to the Canadian Architectural Certification Board (CACB), unless the student opts out in writing. The certification confirms the individual's academic qualifications in compliance with the Canadian Education Standard (CES) in Architecture for entry to the profession. CACB grants and issues certification to applicants who meet the Education Standard and maintains a National Register of those certified and confidential records of all pertinent documentation for all applicants.
- **Coursework.** Students must complete a total of **10.5 full-course equivalents (FCEs)** as follows:
  - 8.5 FCEs in core courses:
    - 2.0 FCEs: Design Studio
      - ARC2013Y *Architectural Design Studio 3*
      - ARC2014Y *Architectural Design Studio 4*
    - 1.0 FCE: Option Studio
      - ARC3015Y *Option Studio* or
      - LAN3016Y *Design Studio Options* or
      - URD2013Y *Urban Design Studio Options*
    - 1.0 FCE: Thesis Studio
      - ARC3021Y *Thesis Studio*
    - 1.0 FCE: Research Methods
      - ARC2017H *Research Methods*
      - ARC3018H *Thesis Research Seminar*
    - 0.5 FCE: Design Technology
      - ARC2023H *Design Technology 2*
    - 2.0 FCEs: Technics and Planning
      - ARC2042H *Site Engineering and Ecology*
      - ARC2046H *Structures 2*
      - ARC2047H *Building Science, Materials, and Construction 3*
      - ARC2048H *Building Science, Materials, and Construction 4*
    - 1.0 FCE: Professional Practice
      - ARC3051H *Professional Practice 1*
      - ARC3052H *Professional Practice 2*.
  - 2.0 elective FCEs, of which 0.5 FCE must be in the History and Theory category.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FW-FW)
Time Limit: 4 years full-time

MArch Program (1-Year: Post-Professional Advanced-Standing Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Architecture, Landscape, and Design's additional admission requirements stated below.
- A post-professional advanced-standing option is available for students who are interested in pursuing advanced studies in architecture beyond their professional degree.
- Applicants must have completed all requirements for an accredited architectural professional degree from a recognized university.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- The post-professional advanced-standing option does not grant a professionally accredited degree.

Completion Requirements

- The course of study is a rigorous full-time, comprehensive program and prepares graduates for the full range of professional activities in architecture. The core program is extensive, and students are required to use their electives to develop an area of special skill and knowledge through an independent study program that culminates in a design thesis.
- Students study full-time, taking all required courses in each given session. An FZ (fail) in any one course, or a B– grade in two studio courses or in any three courses normally results in a recommendation to the School of Graduate Studies to terminate the student's registration in the degree program.
- There is no additional language requirement other than proficiency in English on admission. Writing support is integrated into the program to develop specialized skills that are essential to effective learning and communication in the design fields.

- Progress in the program is dependent upon satisfactory completion of studio and required core courses in sequence. Exceptions can be made at the discretion of the Program Director, and in consultation with the Office of the Registrar and Student Services in the case of accessibility.
- Each student's program of study must receive the approval of the Program Director and, in general, shall consist of a research or design project on which a thesis must be submitted. Faculty members have research expertise in the following areas of interest, which students may pursue: Computation and Fabrication; Health and Society; and Sustainability and Environment.
- **Coursework.** Students must complete a total of **6.0 full-course equivalents (FCEs)** as follows:
  - 4.0 FCEs in core courses:
    - ALA4010H *Field Course*
    - ALA4020H *Thesis Preparation*
    - ALA4021Y *Thesis I*
    - ALA4022Y *Thesis II*
    - ALA4030H *Colloquium*
  - 2.0 elective FCEs, of which 1.0 FCE must be in the student's area of interest.

Mode of Delivery: In person
Program Length: 2 sessions full-time (typical registration sequence: FW)
Time Limit: 3 years full-time

Architecture, Landscape, and Design: Architecture, Landscape, and Design PhD

The PhD program in Architecture, Landscape, and Design engages students in advanced research from an intra-disciplinary approach to architecture, landscape, and urban design. The program addresses cultural, social, environmental, historical, and technological questions of the art and design disciplines and the built environment. The program is intended for students entering careers that demand a syncretic approach to research in design and related disciplines.

This full-time program normally begins in September.

Doctor of Philosophy

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Architecture, Landscape, and Design's additional admission requirements stated below.
- An appropriate master's degree with an average grade of at least A–. A professional degree in a design discipline is highly desirable, but applicants with a master's degree in a related discipline in the humanities and social sciences may be considered. An additional specialized program of study may be proposed for successful applicants without professional training.
- A writing sample in the form of a substantial research paper or publication.
- Recommendation from three referees.
- A two-page proposal that indicates a topic of research within a design discipline, possible sub-field(s) (if desired), and potential supervisors. Although letters of commitment from faculty members are not required, the proposed topic must be congruent with the interests and expertise of at least one member of the PhD standing committee. The admissions committee will obtain commitment from the potential supervisor before admitting an applicant, and the applicant will be informed of this in the letter of offer.
- A portfolio of creative work may also be requested where it is relevant to the applicant's proposed area of research and the degree to which it may require technical skills typically gained in a professional degree program. For example, this could pertain to an applicant whose proposal includes producing renderings. Questions about whether to include a portfolio in an application should be directed to the Program Director or the applicant's prospective supervisor prior to the application deadline.

Completion Requirements

- **Coursework.** Students must complete a total of **6.0 full-course equivalents (FCEs)** including:
  - ALD4030H *Doctoral Research Colloquium*.
  - ALD4040H *Theories and Methods*.
  - ALD4050H *Research Practicum*.
  - ALD4060H *Preparation for Thesis*.
  - 4.0 elective FCEs chosen from advanced (3000 and 4000 series) graduate-level courses offered by the John H. Daniels Faculty of Architecture, Landscape, and Design. Depending on their field of study, students may also take advanced graduate courses in cognate disciplines across the University, pending the approval of the Faculty and in consultation with their supervisors.
  - To complete the chosen thesis topic, students may be required to take additional courses or acquire other skills. This will be determined by the supervisor and the Director of Graduate Studies and may include competence in another language.
- **Comprehensive examinations.** All PhD students must complete a two-part comprehensive examination normally before their second Summer session. Successful completion of the examinations is required to achieve PhD candidacy. The exam's specific nature and scope are to be determined in consultation with the student's supervisor.
  - The first part, normally to be completed in the Summer session of Year 1, is to achieve breadth in the primary area of study so that the student can teach and conduct research within a larger chosen area within the design disciplines. This will usually involve preparing an annotated bibliography in consultation with the supervisor in the early Summer and writing the exam at the end of the Summer. The first part of the exam will consist of a written response to three questions.
  - The second part, normally to be completed during the second session of Year 2, is to achieve depth in a secondary area of study, within the Faculty or beyond, so that the student can master the context for the advanced research they plan to undertake for their thesis. For the secondary area of study, most

students are expected to specialize in one area of study of the design disciplines (for example, architectural history). Alternatively, for this requirement students may focus on a secondary area of study. (For example, computational technologies.) This exam may be administered by a faculty member other than the supervisor, to be determined by the student in consultation with their supervisor. This second part can take one of two formats:
    - a second annotated bibliography to achieve depth in a sub-section of the primary area of study;
    - a course syllabus with readings and outlines of lectures, themes for tutorial discussions, as well as a minimum of three lectures drawn from across the syllabus.
  - Both parts of the examination are marked on a pass/fail basis. An oral examination will follow the completion of the second part of the exam. The oral examination will last no more than 90 minutes.
  - A second attempt of the comprehensive examinations will be allowed within six months, only on the recommendation of the student's supervisor. If the student fails again, their registration will be terminated. The student must pass both parts of the comprehensive examinations before permission to submit a thesis proposal will be granted.
- **Thesis.** Following completion of the comprehensive exam, the student's supervisory committee will be formed. This will take place no later than the Summer of Year 2 to allow the committee to advise on the development of the student's thesis proposal.
  - No later than the beginning of Year 3, the student must submit to the PhD program director a **thesis proposal** that has been approved by the student's supervisory committee. Once the thesis proposal has been approved, the student will achieve candidacy.
  - The doctoral candidate will then proceed to researching and writing the thesis. The student must meet with their thesis supervisory committee within three months of submitting the thesis proposal; thereafter, the candidate is required to meet at least once a year with the supervisory committee.
  - By the end of Year 4, the candidate should **complete a thesis** based on original research and the thesis should make a significant contribution to the area of study. The supervisory committee must approve the completed thesis before it is submitted for examination.
  - The candidate will defend the thesis at the **Doctoral Final Oral Examination**.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

Architecture, Landscape, and Design: Landscape Architecture MLA

The Master of Landscape Architecture (MLA) is a professional program that focuses on urban and regional landscape architecture within a studio-based curriculum. Integrated courses in design; visual communication and modelling; history, theory, and criticism; site engineering and material technologies; horticulture, ecology, hydrology; professional practice and research methods seminars, as well as options for electives, provide a comprehensive professional education in landscape architecture. The program prepares students with a strong base in the fundamentals of the profession, while fostering innovative thinkers able to work collaboratively with allied disciplines, in preparation for becoming the next generation of leaders in landscape architecture.

The **3-year option** within the MLA program is accredited by the Landscape Architecture Accreditation Council. Graduates are eligible to begin the process of professional licensure to become a Landscape Architect in North America. The qualification is also transferable to many other countries and regions; students are advised to inquire with their local licensing body.

The **2-year option** within the MLA program is accredited by the Landscape Architecture Accreditation Council. Graduates are eligible to begin the process of professional licensure to become a Landscape Architect in North America. The qualification is also transferable to many other countries and regions; students are advised to inquire with their local licensing body.

The **1-year option** within the MLA program is ideal for those who wish to undertake a graduate-level, academic research project, independent of the pathway to professional licensure. Those who wish to become a licensed Landscape Architect should consider the 2- or 3-year program options above.

MLA Program (3-Year Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Architecture, Landscape, and Design's additional admission requirements stated below.
- A bachelor's degree (such as BA, BSc, BASc, BES, BFA, BCom) with a minimum average of mid-B.
- Some preparation or experience in architectural design or the creative arts is encouraged, but not required, such as hand or digital drawing, film or animation, graphic design, or sculpture. This program is suitable for those without formal training in design or the arts; graduates of any discipline are encouraged to apply.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

- Students study full-time, taking all required courses in each given session. An FZ (fail) in any one course, or a B– grade in two studio courses or in any three courses normally results in a recommendation to the School of Graduate Studies to terminate the student's registration in the degree program.

- There is no additional language requirement other than proficiency in English on admission. Writing support is integrated into the program to develop specialized skills that are essential to effective learning and communication in the design fields.
- Progress in the program is dependent upon satisfactory completion of studio and required core courses in sequence. Exceptions can be made at the discretion of the Program Director, and in consultation with the Office of the Registrar and Student Services in the case of accessibility.
- **Coursework.** Students must complete a total of **15.0 full-course equivalents (FCEs)** as follows:
  - 14.0 FCEs in core courses:
    - 4.0 FCEs: Design Studio
      - LAN1011Y *Design Studio 1*
      - LAN1012Y *Design Studio 2*
      - LAN2013Y *Design Studio 3*
      - LAN2014Y *Design Studio 4*
    - 1.0 FCE: Design Studio Options
      - LAN3016Y *Design Studio Options* **or**
      - URD2013Y *Urban Design Studio Options* **or**
      - ARC3015Y *Option Studio*
    - 1.0 FCE: Design Studio Thesis
      - LAN3017Y *Design Studio Thesis*
    - 2.0 FCEs: Visual Communication
      - LAN1021H *Visual Communication 1*
      - LAN1022H *Visual Communication 2*
      - LAN2023H *Intermediate Visual Communication*
      - LAN3025H *Advanced Visual Communication*
    - 1.5 FCEs: History Theory Criticism
      - LAN1031H *History Theory Criticism 1*
      - LAN1032H *History Theory Criticism 2*
      - LAN2037H *Contemporary Landscape Theory*
    - 1.5 FCEs: Technology
      - LAN1047H *Site Engineering*
      - LAN2042H *Landscape, Materials, Assemblies, Technology*
      - LAN3045H *Advanced Site Technologies*
    - 2.0 FCEs: Environment
      - LAN1037H *Plants and Design*
      - LAN1041H *Field Studies 1*
      - LAN1043H *Field Studies 2*
      - LAN2045H *Landscape Ecology*
      - LAN2047H *Landscape Hydrology*
    - 1.0 FCE: Professional Practice and Research Methods
      - LAN3051H *Landscape Architecture Research Methods*
      - LAN3052H *Professional Practice*.
  - 1.0 elective FCE.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FW-FW-FW)
Time Limit: 3 years full-time

MLA Program (2-Year: Second-Year Advanced-Standing Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Architecture, Landscape, and Design's additional admission requirements stated below.
- An appropriate bachelor's degree in landscape architecture, architecture, architectural studies, or environmental design, or a comparable degree focusing on the design of landscapes and the built environment.
- Admission is based on the merits of the applicant's overall academic background and strength of design portfolio as evaluated by the admissions committee.
- Admission to the advanced-standing option depends upon the student's previous coursework exempting them Year 1 of the MLA curriculum. If the student's coursework does not satisfy the Year 1 requirements, they may be considered for the 3-year option.
- Minimum previous completion of three design studio courses, two courses in digital visual representation (including Rhinoceros, Illustrator, Laser Cutting), two courses in landscape architecture history and theory (one in 20th-century), and two courses in landscape architecture site engineering (i.e., site grading) and planting design, horticulture, urban ecology, or forest ecology.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

- Students study full-time, taking all required courses in each given session. An FZ (fail) in any one course, or a B– grade in two studio courses or in any three courses normally results in a recommendation to the School of Graduate Studies to terminate the student's registration in the degree program.
- There is no additional language requirement other than proficiency in English on admission. Writing support is integrated into the program to develop specialized skills that are essential to effective learning and communication in the design fields.
- Progress in the program is dependent upon satisfactory completion of studio and required core courses in sequence. Exceptions can be made at the discretion of the Program Director, and in consultation with the Office of the Registrar and Student Services in the case of accessibility.
- **Coursework**. Students must complete a total of **10.0 full-course equivalents (FCEs)** as follows:
  - 9.0 FCEs in core courses as follows:
    - 2.0 FCEs: Design Studio
      - LAN2013Y *Design Studio 3*
      - LAN2014Y *Design Studio 4*

        - 1.0 FCE: Design Studio Options
            - LAN3016Y *Design Studio Options* **or**
            - URD2013Y *Urban Design Studio Options* **or**
            - ARC3015Y *Option Studio*
        - 1.0 FCE: Design Studio Thesis
            - LAN3017Y *Design Studio Thesis*
        - 1.0 FCE: Visual Communication
            - LAN2023H *Intermediate Visual Communication*
            - LAN3025H *Advanced Visual Communication*
        - 0.5 FCE: History Theory Criticism
            - LAN2037H *Contemporary Landscape Theory*
        - 1.0 FCE: Technology
            - LAN2042H *Landscape, Materials, Assemblies, Technology*
            - LAN3045H *Advanced Site Technologies*
        - 1.5 FCEs: Environment
            - LAN1037H *Plants and Design*
            - LAN2045H *Landscape Ecology*
            - LAN2047H *Landscape Hydrology*
        - 1.0 FCE: Professional Practice and Research Methods
            - LAN3051H *Landscape Architecture Research Methods*
            - LAN3052H *Professional Practice*
    - 1.0 elective FCE.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FW-FW)
Time Limit: 3 years full-time

MLA Program (1-Year: Post-Professional Advanced-Standing Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Architecture, Landscape, and Design's additional admission requirements stated below.
- A post-professional advanced-standing option is available for students who are interested in pursuing advanced study beyond their professional degree.
- Applicants must have completed all requirements for an accredited professional degree in landscape from a recognized university.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- The post-professional advanced-standing option does not grant a professionally accredited degree.

Completion Requirements

- Students study full-time, taking all required courses in each given session. An FZ (fail) in any one course, or a B– grade in two studio courses or in any three courses normally results in a recommendation to the School of Graduate Studies to terminate the student's registration in the degree program.
- There is no additional language requirement other than proficiency in English on admission. Writing support is integrated into the program to develop specialized skills that are essential to effective learning and communication in the design fields.
- Progress in the program is dependent upon satisfactory completion of studio and required core courses in sequence. Exceptions can be made at the discretion of the Program Director, and in consultation with the Office of the Registrar and Student Services in the case of accessibility.
- Each student's program of study must receive the approval of the Program Director and, in general, shall consist of a research or design project on which a thesis must be submitted. Faculty members have research expertise in the following areas of interest, which students may pursue: Computation and Fabrication; Health and Society; and Sustainability and Environment.
- **Coursework.** Students must complete a total of **6.0 full-course equivalents (FCEs)** as follows:
    - 4.0 FCEs in core courses:
        - ALA4010H *Field Course*
        - ALA4020H *Thesis Preparation*
        - ALA4021Y *Thesis I*
        - ALA4022Y *Thesis II*
        - ALA4030H *Colloquium*
    - 2.0 elective FCEs, of which 1.0 FCE must be in the student's area of interest.

Mode of Delivery: In person
Program Length: 2 sessions full-time (typical registration sequence: FW)
Time Limit: 3 years full-time

Architecture, Landscape, and Design: Urban Design MUD

The **Master of Urban Design (MUD)** is a post-professional program that prepares architects and landscape architects for design-based research and professional practice at the urban and regional scales. The MUD program is committed to design as a primary medium of operation and research in a broad intellectual framework that includes geography, environmental studies, social sciences, media studies, economics, and engineering. It aims for responsible and creative design in the context of contemporary city and region building, with attention to new paradigms of urbanization, global economic restructuring, and information technology.

The program emphasizes a coherent intellectual approach that is committed to analysis and critique and seeks to become the central Canadian forum for advanced research, design innovation, scholarship, criticism, and debate in urban design.

MUD Program (2-Year)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Architecture, Landscape, and Design's additional admission requirements stated below.
- A professional degree in architecture (BArch or MArch) or landscape architecture (BLA, MLA). Applicants with a degree in urban planning (MCP, MUP, or MScPl) may be considered for admission if they are able to demonstrate design potential in their application portfolio. Applicants may be required to complete design and/or visual communication workshops before they begin the MUD program, to prepare them for the design studio component of the MUD curriculum.
- All applicants must submit a portfolio of design work for review. Admission is based on the merits of the applicant's overall academic background and strength of design portfolio as evaluated by the admissions committee.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

- Students study full-time, taking all required courses in each given session. An FZ (fail) in any one course, or a B– grade in two studio courses or in any three courses normally results in a recommendation to the School of Graduate Studies to terminate the student's candidacy for the degree program.
- There is no additional language requirement other than proficiency in English on admission. Writing support is integrated into the program to develop specialized skills that are essential to effective learning and communication in the design fields.
- Progress in the program is dependent upon satisfactory completion of studio and required core courses in sequence. Exceptions can be made at the discretion of the Program Director, and in consultation with the Office of the Registrar and Student Services in the case of accessibility.
- **Coursework**. Students must complete a total of **9.5 full-course equivalents (FCEs)** as follows:
  - 7.0 FCEs in core courses:
    - 2.0 FCEs: Design Studio
      - URD1011Y *Urban Design Studio 1*
      - URD1012Y *Urban Design Studio 2*
    - 1.0 FCE: Option Design Studio
      - URD2013Y *Urban Design Studio Options*
    - 0.5 FCE: Thesis Preparation and Research
      - URD2014H *Thesis Research and Preparation*
    - 1.0 FCE: Design Thesis
      - URD2015Y *Urban Design Studio Thesis*
    - 1.0 FCE: History Theory Criticism
      - URD1031H *Urban History Theory Criticism*
      - URD1041H *Introduction to Urban Design Theory and Practice*
    - 1.5 FCEs: other courses
      - URD1021H *Urban Design Computation*
      - URD1044H *Urban Design and Development* **or** PLA1655H *Urban Design and Development Controls*
      - URD2041H *Business and Land Use Planning in Real Estate Development* **or** PLA1651H *Planning and Real Estate Development*
  - 2.5 elective FCEs.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FW-FW)
Time Limit: 3 years full-time

Architecture, Landscape, and Design: Visual Studies MVS

The Master of Visual Studies (MVS) is a two-year, full-time professional program with two fields:

- Curatorial Studies: prepares students for contemporary curatorial practice through research-based scholarship and critical discourse.
- Studio: prepares students to further their contemporary art practices through research-based scholarship and critical discourse.

The program normally begins in September.

Architecture, Landscape, and Design: Visual Studies MVS; Field: Curatorial Studies

Field: Curatorial Studies

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Architecture, Landscape, and Design's additional admission requirements stated below.
- An appropriate bachelor's degree with significant coursework in humanities and cultural theory from a recognized university, or an appropriate BFA degree from a recognized university.
- Overall average of at least a B+.
- Applications must include:
  - artist's statement that includes a description of the proposed body of work in curatorial to be undertaken during the two-year program;
  - full curriculum vitae (CV) with details of exhibition, professional activity, and education;
  - documentation of recent curatorial work;
  - three letters of recommendation;
  - a critical writing sample;
  - transcripts;

    - a portfolio of previous work dependent on the field of future study.
- Applicants must present a portfolio with documentation of exhibitions including exhibition brochures, curatorial essays, announcement cards, and/or catalogues from curatorial work.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

- **Coursework.** Students must complete a total of **6.5 full-course equivalents (FCEs)** as follows:
    - 4.5 FCEs from the approved course list for Curatorial Studies:
        - VIS1004H *Internship*
        - VIS1010H *Contemporary Art Since 1960*
        - VIS1020H *Contemporary Art: Theory and Criticism*
        - VIS1101H *Paradigmatic Exhibitions: History, Theory, Criticism*
        - VIS1102H *Curatorial Studies Exhibition Research*
        - VIS2002H *MVS Contemporary Art Issues*
        - VIS2101Y *Curatorial Studies Exhibition Project*
        - VIS2102H *Curatorial Studies Collaboration*.
    - 0.5 FCE MVS Proseminars:
        - VIS1000H *MVS Proseminar*
        - VIS2000H *MVS Proseminar*.
    - 1.5 FCEs in electives. Elective courses are selected in consultation with the student's advisor and are subject to the approval of the Program Director.
- The **internship** requirement is normally completed during the Summer session between Year 1 and Year 2.
- MVS Curatorial Studies students are supervised by an **Advisory Panel** made up of the Director of the Visual Studies program (or their designate), a graduate faculty member who will be considered to be the student's Principal Advisor, one of the University of Toronto's gallery directors, and an external reader chosen upon approval of the Principal Advisor and Program Director.
- The graduating **thesis project** is composed of an exhibition and a qualifying paper.
- An FZ (fail) in any one course or a B– grade in any two courses normally results in a recommendation to the School of Graduate Studies to terminate the student's registration in the degree program.

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW)
Time Limit: 3 years full-time

Architecture, Landscape, and Design: Visual Studies MVS; Field: Studio

Field: Studio

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Architecture, Landscape, and Design's additional admission requirements stated below.
- An appropriate bachelor's degree with significant coursework in humanities and cultural theory from a recognized university, or an appropriate BFA degree from a recognized university.
- Overall average of at least a B+.
- Applications must include:
    - artist's statement that includes a description of the proposed body of work in studio to be undertaken during the two-year program;
    - full curriculum vitae (CV) with details of exhibition, professional activity, and education;
    - documentation of recent studio work;
    - three letters of recommendation;
    - a critical writing sample;
    - transcripts;
    - a portfolio of previous work dependent on the field of future study.
- Applicants must present a portfolio with documentation of their artworks. Applicants will also include a fully annotated listing for all portfolio materials that provides detailed information about media, year of production, dimensions, part of a series, full running length (in the case of media artworks), and circumstances of display (in the case of installation works and performance works).
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

- **Coursework.** Students must complete a total of **6.5 full-course equivalents (FCEs)** as follows:
    - 4.5 FCEs from the approved course list for Studio:
        - VIS1001H *Interdisciplinary Studio Practicum/Critiques 1*
        - VIS1003H *Interdisciplinary Studio Practicum/Critiques 2*
        - VIS1004H *Internship*
        - VIS1010H *Contemporary Art Since 1960*
        - VIS1020H *Contemporary Art: Theory and Criticism*
        - VIS2001H *Studio Practicum/Critiques 3*
        - VIS2002H *MVS Contemporary Art Issues*
        - VIS2003Y *MVS Project*.
    - 0.5 FCE MVS Proseminars:
        - VIS1000H *MVS Proseminar*
        - VIS2000H *MVS Proseminar*.

    - 1.5 FCEs in electives. Elective courses are selected in consultation with the student's advisor and are subject to the approval of the Program Director.
- The **internship** requirement is normally completed during the Summer session between Year 1 and Year 2.
- MVS Studio students are supervised by an **Advisory Panel** made up of the Director of the Visual Studies program (or designate), a studio faculty member of the MVS program who is considered the student's Principal Advisor, a second MVS studio faculty member, and another faculty member (not necessarily a member of the MVS program). The Final Studio Thesis defence requires an external reader chosen upon approval of the Principal Advisor and Program Director.
- The graduating **thesis project** is composed of an exhibition and a qualifying paper.
- An FZ (fail) in any one course or a B– grade in any two courses normally results in a recommendation to the School of Graduate Studies to terminate the student's registration in the degree program.

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW)
Time Limit: 3 years full-time

Architecture, Landscape, and Design: Architecture MArch Courses

Not all electives are offered every year. Please check the timetable for current listings available.

Core Courses

Design Studio

Course Code	Course Title
ARC1011Y	Architectural Design Studio 1
ARC1012Y	Architectural Design Studio 2
ARC2013Y	Architectural Design Studio 3
ARC2014Y	Architectural Design Studio 4

Option Studio

Course Code	Course Title
ARC3015Y **or** LAN3016Y **or** URD2013Y	Option Studio **or** Design Studio Options **or** Urban Design Studio Options

Thesis Studio

Course Code	Course Title
ARC3021Y	Thesis Studio

Design Technology

Course Code	Course Title
ARC1022H	Design Technology 1
ARC2023H	Design Technology 2

History

Course Code	Course Title
ARC1031H	Historical Perspectives on Topics in Architecture 1
ARC1032H	Historical Perspectives on Topics in Architecture 2

Post Professional

Course Code	Course Title
ALA4010H	Field Course
ALA4020H	Thesis Preparation
ALA4021Y	Thesis I
ALA4022Y	Thesis II
ALA4030H	Colloquium

Professional Practice

Course Code	Course Title
ARC3051H	Professional Practice 1
ARC3052H	Professional Practice 2

Research Methods

Course Code	Course Title
ARC2017H	Research Methods
ARC3018H	Thesis Research Seminar

Technics and Planning

Course Code	Course Title
ARC1041H	Building Science, Materials, and Construction 1
ARC1043H	Building Science, Materials, and Construction 2
ARC1046H	Structures 1
ARC2042H	Site Engineering and Ecology
ARC2046H	Structures 2
ARC2047H	Building Science, Materials, and Construction 3
ARC2048H	Building Science, Materials, and Construction 4

Visual Communication

Course Code	Course Title
ARC1021H	Visual Communications 1

Elective Courses

Architecture and Health

Course Code	Course Title
ARC3600H to ARC3625H	Selected Topics in the History and Theory of Architecture and Health

Computer Modelling

Course Code	Course Title
ARC3200H to ARC3225H	Selected Topics in Advanced Computer Applications

Design

Course Code	Course Title
ARC1100H	Selected Topics in Design
ARC2015H	Global Architecture: Urban Analysis and Documentation
ARC2016H	Global Design Studio

History and Theory

Course Code	Course Title
ARC3038H	Global Architecture: History and Theory
ARC3100H to ARC3125H	Selected Topics in Urban Design
ARC3300H to ARC3325H	Selected Topics in Architectural History and Theory

Independent Study

Course Code	Course Title
ARC3039H	Independent Study and Research in Architecture

Other

Course Code	Course Title
ARC3700H to ARC3725H	Selected Topics in Architecture

Professional Practice

Course Code	Course Title
ARC4500H to ARC4510H	Selected Topics in Professional Practice

Technics and Planning

Course Code	Course Title
ARC3400H to ARC3425H	Selected Topics in Architecture and Technology
ARC3500H to ARC3525H	Selected Topics in Sustainable Design

Architecture, Landscape, and Design: Architecture, Landscape, and Design PhD Courses

Core Courses

Course Code	Course Title
ALD4030H	Doctoral Research Colloquium
ALD4040H	Theories and Methods
ALD4050H	Research Practicum
ALD4060H	Preparation for Thesis

Elective Courses

Not all electives are offered every year. Please check the timetable for current listings available from the Summer session. Electives are to be selected from advanced (3000 and 4000 series) graduate-level courses offered at the Daniels or other Faculties. These include the following:

Course Code	Course Title
ALD4090H	Directed Reading in Design
ALD4100H to ALD4125H	Advanced Topics in Architecture, Landscape, and Design
ARC2016H	Global Design Studio
ARC2090H	Studies Abroad
ARC2095H	Design Build
ARC3100H to ARC3125H	Selected Topics in Urban Design
ARC3200H to ARC3225H	Selected Topics in Advanced Computer Applications
ARC3300H to ARC3325H	Selected Topics in Architectural History and Theory
ARC3400H to ARC3425H	Selected Topics in Architecture and Technology
ARC3500H to ARC3525H	Selected Topics in Sustainable Design
ARC3600H to ARC3625H	Selected Topics in the History and Theory of Architecture and Health
ARC3700H to ARC3725H	Selected Topics in Architecture
ARC4500H to ARC4510H	Selected Topics in Professional Practice
LAN3400H to LAN3410H	Landscape Architecture Topics: Techniques
LAN3700H to LAN3710H	Landscape Architecture Topics: Society
LAN3800H to LAN3810H	Landscape Architecture Topics: Technology
LAN3900H to LAN3910H	Landscape Architecture Topics: History, Theory, Criticism
URD1200H to URD1210H	Selected Topics in History and Theory of Urban Design
URD1500H to URD1525H	Selected Topics in Urban Design
VIS3001H	Advanced Readings in Visual Studies
VIS3002H	Advanced Readings in Curatorial Studies
VIS3003H	Special Topics in Art and Culture

Architecture, Landscape, and Design: Landscape Architecture MLA Courses

Not all electives are offered every year. Please check the timetable for current listings available.

Core Courses

Design Studio

Course Code	Course Title
LAN1011Y	Design Studio 1
LAN1012Y	Design Studio 2
LAN2013Y	Design Studio 3
LAN2014Y	Design Studio 4
LAN3016Y **or**	Design Studio Options **or**

Course Code	Course Title
URD2013Y **or** ARC3015Y	Urban Design Studio Options **or** Option Studio
LAN3017Y	Design Studio Thesis

Environment

Course Code	Course Title
LAN1037H	Plants and Design
LAN1041H	Field Studies 1
LAN1043H	Field Studies 2
LAN2045H	Landscape Ecology
LAN2047H	Landscape Hydrology

History Theory Criticism

Course Code	Course Title
LAN1031H	History Theory Criticism 1
LAN1032H	History Theory Criticism 2
LAN2037H	Contemporary Landscape Theory

Post Professional

Course Code	Course Title
ALA4010H	Field Course
ALA4020H	Thesis Preparation
ALA4021Y	Thesis I
ALA4022Y	Thesis II
ALA4030H	Colloquium

Proseminar

Course Code	Course Title
LAN3051H	Landscape Architecture Research Methods
LAN3052H	Professional Practice

Technology

Course Code	Course Title
LAN1047H	Site Engineering
LAN2042H	Landscape, Materials, Assemblies, Technology
LAN3045H	Advanced Site Technologies

Visual Communication

Course Code	Course Title
LAN1021H	Visual Communication 1
LAN1022H	Visual Communication 2
LAN2023H	Intermediate Visual Communication
LAN3025H	Advanced Visual Communication

Elective Courses

Design

Course Code	Course Title
LAN3200H to LAN3210H	Landscape Architecture Topics: Design

Environment

Course Code	Course Title
LAN3300H to LAN3310H	Landscape Architecture Topics: Environment
LAN3500H to LAN3510H	Landscape Architecture Topics: Plants

History, Theory, Criticism

Course Code	Course Title
LAN3039H	Independent Study
LAN3700H to LAN3710H	Landscape Architecture Topics: Society
LAN3900H to LAN3910H	Landscape Architecture Topics: History, Theory, Criticism

Proseminar

Course Code	Course Title
LAN3600H to LAN3610H	Landscape Architecture Topics: Practice

Technology

Course Code	Course Title
LAN3400H to LAN3410H	Landscape Architecture Topics: Techniques
LAN3800H to LAN3810H	Landscape Architecture Topics: Technology

Visual Communication

Course Code	Course Title
LAN3100H to LAN3110H	Landscape Architecture Topics: Communication

Architecture, Landscape, and Design: Urban Design MUD Courses

Not all electives are offered every year. Please check the timetable for current listings available.

Core Courses

Design

Course Code	Course Title
URD1011Y	Urban Design Studio 1
URD1012Y	Urban Design Studio 2
URD2012Y	Independent Studio in Urban Design (may be undertaken in lieu of an option studio)
URD2013Y **or** LAN3016Y **or** ARC3015Y	Urban Design Studio Options **or** Design Studio Options **or** Option Studio
URD2015Y	Urban Design Studio Thesis

History, Theory, Criticism

Course Code	Course Title
URD1031H	Urban History Theory Criticism
URD1041H	Introduction to Urban Design Theory and Practice

Other

Course Code	Course Title
URD1021H	Urban Design Computation
URD1044H / PLA1655H	Urban Design and Development / Urban Design and Development Controls
URD2014H	Thesis Research and Preparation
URD2041H / PLA1651H	Business and Land Use Planning in Real Estate Development / Planning and Real Estate Development

Elective Courses

History, Theory, Criticism

Course Code	Course Title
URD1200H to URD1210H	Selected Topics in History and Theory of Urban Design
URD1500H to URD1525H	Selected Topics in Urban Design

Other

Course Code	Course Title
URD1022H	Topics in Computer-Aided Urban Design
URD1042H	Urban Design and Environmental Systems
URD1300H to URD1310H	Selected Topics in Digital Urbanism

Architecture, Landscape, and Design: Visual Studies MVS Courses

MVS Curatorial Studies Courses

Course Code	Course Title
VIS1000H	MVS Proseminar
VIS1004H	Internship
VIS1010H	Contemporary Art Since 1960
VIS1020H	Contemporary Art: Theory and Criticism
VIS1101H	Paradigmatic Exhibitions: History, Theory, and Criticism
VIS1102H	Curatorial Studies Exhibition Research
VIS2000Y	MVS Proseminar
VIS2002H	MVS Contemporary Art Issues
VIS2101Y	Curatorial Studies Exhibition Project
VIS2102H	Curatorial Studies Collaboration

MVS Studio Courses

Course Code	Course Title
VIS1000H	MVS Proseminar
VIS1001H	Interdisciplinary Studio Practicum/Critiques 1
VIS1003H	Interdisciplinary Studio Practicum/Critiques 2
VIS1004H	Internship
VIS1010H	Contemporary Art Since 1960
VIS1020H	Contemporary Art: Theory and Criticism
VIS2000Y	MVS Proseminar
VIS2001H	Interdisciplinary Studio Practicum/Critiques 3
VIS2002H	MVS Contemporary Art Issues
VIS2003Y	MVS Studio Project

MVS Elective Courses

Course Code	Course Title
VIS3001H	Advanced Readings in Visual Studies
VIS3002H	Advanced Readings in Curatorial Studies
VIS3003H	Special Topics in Art and Culture

Art History

Art History: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Art History

MA and PhD

- Fields:
  - Ancient;
  - Early Modern;
  - Medieval;
  - Modern and Contemporary

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Book History and Print Culture**
  - Art History, MA, PhD
- **Diaspora and Transnational Studies**
  - Art History, MA, PhD
- **Jewish Studies**
  - Art History, MA, PhD
- **Mediterranean Archaeology**
  - Art History, PhD
- **Sexual Diversity Studies**
  - Art History, MA, PhD

Overview

The Department of Art History's graduate programs emphasize the research, writing, and teaching necessary to pursue a career in academia or museum work. The programs benefit from affiliations at the University with the Centre for Medieval Studies and the Centre for Renaissance and Reformation Studies, as well as resources in Toronto including the Royal Ontario Museum, the Art Gallery of Ontario, the Aga Khan Museum, and the Gardiner Museum.

Contact and Address

Web: arthistory.utoronto.ca
Email: graduate.arthistory@utoronto.ca
Telephone: (416) 946-3960

Graduate Department of Art History
University of Toronto
Sidney Smith Hall
Room 6037A, 100 St. George Street
Toronto, Ontario
M5S 3G3 Canada

Art History: Graduate Faculty

Full Members

Anderson, Christy - BA, MA, PhD
Bear, Jordan - BA, MA, MPH, PhD
Caskey, Jill - AB, MA, MPH, PhD
Cheetham, Mark - BPhil, MA, PhD
Clarke, Joseph - BSc, MArch, MPH, PhD
Cohen, Adam - PhD
Ewald, Bjoern - AM, PhD
Gu, Yi - BLitt, MMSt, PhD
Harakawa, Maya - BA, MPH, PhD
Harney, Elizabeth - AB, MA, PhD
Jain, Kajri - PhD ***(Graduate Chair)***
Kaplan, Louis - AB, AM, DPhil
Kavaler, Ethan Matt - BA, MA, PhD
Kim, SeungJung - BS, MA, MPH, PhD, PhD ***(Director of Graduate Studies)***
Knappett, Carl - MA, PhD
Legge, Elizabeth M.M. - BA, BA, MA, PhD
Levy, Evonne - MFA, PhD
Migwans, Mikinaak - BFA, MA
Periti, Giancarla - PhD
Purtle, Jennifer - BA, MPH, MA, PhD
Ricco, John - BA, MA, PhD
Sapirstein, Philip - BA, PhD
Sohm, Philip - BA, MA, PhD
Syme, Alison - PhD

Members Emeriti

Richardson, Douglas - BA, MA, PhD
Shaw, Joseph - BA, MAT, PhD
Shaw, Maria - PhD

Associate Members

Brancaccio, Pia - DA
Dewan, Deepali - BA, MA, PhD
Fee, Sarah - PhD
Galaty, Michael - BA, MA, PhD
Greist, Alexandra - AB, AM, PhD
Kooistra, Lorraine Janzen - BA, MA, PhD
Letesson, Quentin - PhD
Nikolakopoulou, Irene - BA, MA, DPhil
Shephard, Tim - BM, MusD
Shields, Caroline - DA

Art History: Art History MA

The **Master of Arts (MA) program** is a course-based degree designed to prepare art history students for doctoral research, curatorial work, art consultation, heritage programs, cultural journalism, and secondary school teaching.

MA students do not complete a thesis and are not assigned a supervisor. The MA program can be taken on a full-time or part-time basis.

MA Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Art History's additional admission requirements stated below.
- Strong overall grade average in art history and closely related subjects and at least a B+ average in recent senior art history courses. Outstanding applicants with other backgrounds may be considered.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **3.0 graduate full-course equivalents (FCEs)** as follows:
  - Coursework must be chosen from at least three of four time periods: 1) Ancient, 2) Medieval, 3) Early Modern, 4) Modern and Contemporary. No more than 2.0 FCEs may be taken in any one of the four time periods.
  - Coursework must also be taken in at least two of the following areas: Europe/United States/Canada; East Asia; South Asia; Africa; Islamic; Diasporic; Indigenous. A course designated as Global — or any other category without a specific area of focus — may count toward the distribution requirement if the student's final paper is on an appropriate topic.
  - A maximum of two seminars (1.0 FCE) may be reading courses or special topics courses (course codes beginning with FAH30XXH).
  - The equivalent of 1.0 FCE may be taken in another graduate department (for example, Medieval Studies, Near and Middle Eastern Civilizations), subject to approval of the Department of Art History and the other department concerned.
- Reading knowledge of a language other than English (normally French, German, Italian, Arabic, or Chinese); tested in the first session.
- A research methods workshop.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Art History: Art History PhD

The PhD program is designed to prepare art history students for college and university teaching, museum curatorships, and other research positions.

Applicants may enter the PhD program via one of two routes: 1) following completion of an appropriate master's degree or 2) direct entry after completing a bachelor's degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Art History's additional admission requirements stated below.
- Minimum A– average in their master's program.
- Reading knowledge of two foreign languages relevant to the student's research.
- Students unable to meet language requirements for particular courses may be refused admission to courses; enrolment in Fall courses is limited and subject to instructor's approval.

Completion Requirements

- **Coursework**. Students must successfully complete a total of **3.0 full-course equivalents (FCEs)** of graduate courses as follows:
  - FAH5000Y *Comprehensive Examinations and Dissertation Topic Reading Course* with the student's interim supervisor to prepare for the comprehensive examinations.
  - FAH1001H *Methods of Art History*, a departmental methodology course, must be taken in Year 1. With departmental approval, credit may be given for a research methodology course taken previously.
  - A maximum of two seminars (1.0 FCE) may be reading courses or special topics courses (course codes beginning with FAH30XXH).
  - Students are encouraged to take courses reflecting a variety of time periods and geographic zones.
- A research methods workshop is recommended.
- At the end of each academic year, students' progress will be reviewed to ensure that they have made **satisfactory progress** through the program; this includes maintaining full-time status with a GPA of at least A– and completion of all language requirements.
- Students must pass **examinations in two foreign languages** by the end of Year 2. Students who have completed a language exam during their MA may apply to have the exam counted towards fulfilling one of the two foreign language requirements. The appropriate languages will be set by the interim supervisor in consultation with the Director of Graduate Studies, and additional languages may be required depending on the research needs of the student's dissertation topic.

- Within Years 1 and 2, students complete coursework and language requirements and secure a **prospective supervisor** with whom they will discuss plans for the comprehensive examinations.
- Additionally, within Years 1 and 2, students must take a three-part **comprehensive examination:** 1) the first part focusing on one of the four fields, 2) the second on the student's dissertation field, and 3) the third (oral) discussing the first two.
  - The exam consists of an in-house written section, a take-home essay, and an oral exam.
  - The student will meet with the Examination Committee (normally made up of at least three members of the department, one of whom will be the prospective dissertation supervisor), in order to define the areas of the examination, the length of study, and such readings and special topics as deemed appropriate.
  - If a student fails the comprehensive examinations, one further attempt is allowed, no more than three months later. A second failure results in the immediate removal of the student from the program.
  - Once the student passes the exam, their graduate record will be updated to reflect successful exam completion.
- Immediately following successful completion of comprehensive examinations, students must formally establish their **PhD Supervisory Committee**. This will include the faculty member acting as the dissertation supervisor, and two other graduate faculty members. These arrangements must be approved by the department's Graduate Program Committee.
- Working with the PhD Supervisory Committee, the student will develop a detailed **proposal for their research**, to be submitted 3 months after the successful completion of their comprehensive exam. The length and specific nature of the proposal will be determined by the Supervisory Committee and the PhD student. The drafted proposal must be approved, first by the Supervisory Committee, and then by the Director of Graduate Studies.
- At some point during the dissertation stage, students will present their work to the faculty and students at a colloquium in an appropriate format and at a time to be determined by the supervisor in consultation with the Director of Graduate Studies.
- **Normal timeline through the program:** By the end of Year 1, students should have completed all course requirements for the degree. By the end of the following year of registration, students should satisfy any remaining requirements, select a thesis committee, pass the comprehensive examination, and submit a thesis proposal. Thereafter, the candidate selects a member of the thesis committee to be the thesis supervisor and begins work on their thesis.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Art History's additional admission requirements stated below.
- Applicants with a bachelor's degree who have an exceptionally strong academic record; minimum grade average of A– in art history and humanities courses in the last two years.
- Reading knowledge of two foreign languages relevant to the student's research.
- Students unable to meet language requirements for particular courses may be refused admission to courses; enrolment in Fall courses is limited and subject to instructor's approval.

Completion Requirements

- **Coursework**. Students must successfully complete **at least 5.5 full-course equivalents** (FCEs) in art history as follows:
  - FAH5000Y *Comprehensive Examinations and Dissertation Topic Reading Course* must be taken in Year 2 with the student's interim supervisor to prepare for the comprehensive examinations.
  - FAH1001H *Methods of Art History*, a departmental methodology course, must be taken in Years 1 and 2. With departmental approval, credit may be given for a research methodology course taken previously.
  - The remaining 4.0 FCEs must be chosen from at least three of the following fields: (1) Ancient, (2) Medieval, (3) Early Modern, 4) Modern and Contemporary. Any course that covers more than one of these time periods may only be used to fulfil one of the FCE distributions.
  - Coursework must be taken in at least two geographic zones (Western, East Asian, South Asian, African, etc.). Courses without a specific regional focus may count toward the geographical distribution requirement if the student's final paper is on an appropriate topic.
  - A maximum of two seminars (1.0 FCE) may be reading courses or special topics courses (course codes beginning with FAH30XXH).
- Students must maintain an A– average.
- A research methods workshop, normally taken in Year 1.
- Students must pass **examinations in two foreign languages** by the end of Year 2. Students focusing on Ancient, Medieval, and Renaissance and Baroque will normally be expected to pass the examination in German as one of their two languages. The appropriate languages will be set by the interim supervisor in consultation with the Director of Graduate Studies, and additional languages may be required depending on the research needs of the student's dissertation topic. Language requirements must be completed prior to approval of the dissertation proposal.

- At the beginning of Year 3, students' progress will be reviewed to ensure that they have made **satisfactory progress** through the program; this includes maintaining full-time status with a GPA of at least A– and completion of all language requirements.
- Within the first three years, students must take a **three-part comprehensive examination**: 1) the first part focusing on one of the four fields, 2) the second on the dissertation field, and 3) the third (oral) discussing the first two.
  - The exam consists of an in-house written section, a take-home essay, and an oral exam.
  - Upon the completion of all coursework, PhD students must seek out and secure the participation of a **prospective supervisor** with whom they will discuss plans for the comprehensive examinations.
  - The student will meet with the Examination Committee (normally made up of at least three members of the department, one of whom will be the prospective dissertation supervisor) in order to define the areas of the examination, the length of study, and such readings and special topics as deemed appropriate.
  - If a student fails the comprehensive examinations, one further attempt is allowed, no more than three months later. A second failure results in the immediate removal of the student from the program.
  - Once the student passes the exam, their graduate record will be updated to reflect successful exam completion.
- Immediately following successful completion of comprehensive examinations, students must formally establish their **PhD Supervisory Committee**. This will include the faculty member acting as the dissertation supervisor, and two other graduate faculty members. These arrangements must be approved by the department's Graduate Program Committee.
- Working with the PhD Supervisory Committee, the student will develop a detailed **proposal for their research**, to be submitted 3 months after the successful completion of their comprehensive exam. The length and specific nature of the proposal will be determined by the Supervisory Committee and the PhD student. The drafted proposal must be approved, first by the Supervisory Committee, and then by the department's Director of Graduate Studies.
- At some point during the dissertation stage, students will present their work to the faculty and students at a colloquium in an appropriate format and at a time to be determined by the supervisor in consultation with the Director of Graduate Studies.
- **Normal timeline through the program:** By the end of Year 2, students should have completed all course requirements for the degree. By the end of the following year of registration, students should satisfy any remaining requirements, select a thesis committee, pass the comprehensive examination, and submit a thesis proposal. Thereafter, the candidate selects a member of the thesis committee to be the thesis supervisor and begins work on their thesis.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Art History: Art History MA, PhD Courses

Not all courses are offered each year. Check the departmental website for course availability under the current timetable.

Methods

Course Code	Course Title
FAH1001H	Methods of Art History

Ancient

Course Code	Course Title
FAH2020H	Connectivity and Mobility: Networks in the Ancient World
FAH2021H	Myth and Fantasy in Roman Painting
FAH2025H	Visual Narrative and Time in Ancient Greek and Roman Art
FAH2027H	Women and Gender in Ancient Greece
FAH2028H	Art and the Philosophy of Time
FAH2034H	Topics in Roman Imperial Art
FAH2037H	Empathy, Embodiment, and Emotion in Ancient Art
FAH2038H	Greek and Roman Sculpture in the Royal Ontario Museum
FAH2041H	Greek Vases at the Royal Ontario Museum
FAH2042H	Sex, Gender, and Subjectivity in Ancient Art
FAH2060H	Artisans and Artists in the Ancient Mediterranean

Medieval

Course Code	Course Title
FAH1118H	The Medieval Treasury
FAH1119H	Global Medieval Art in China
FAH1127H	Early Medieval Art
FAH1130H	Architecture of the Otherworld
FAH1175H	Early Islamic Architecture: 7th–10th c.
FAH1176H	History of Islamic Cairo (7th–16th c.)
FAH1177H	Building the Islamic Empire: Architecture of the Umayyads

Early Modern

Course Code	Course Title
FAH1202H	Correggio and the Problem of Italian Renaissance Art
FAH1204H	The Cassinese Art of Reform in Renaissance Italy
FAH1205H	Early Modern Intermediality
FAH1206H	Artistic Localities in the Early Modern World
FAH1207H	Formalism and Its Objects
FAH1210H	Chinese Painting: Objects, Theories, Methods
FAH1220H	Multi-Media Transmorphism
FAH1221H	Inside the Painter's Studio
FAH1229H	Architecture of the Global Renaissance
FAH1231H	Northern European Sculpture 1400–1600
FAH1232H	Liquescent Art and Cultures
FAH1310H	Topics in Chinese Painting History

Modern and Contemporary

Course Code	Course Title
FAH1410H	Artwriting Past and Present
FAH1411H	Art and Analogy
FAH1416H	Art History and the Digital
FAH1457H	Vernacular Photography
FAH1460H	Wallace Berman and His Countercultural Circles
FAH1462H	Photography and Scientific Representation in the 19th Century
FAH1463H	Realisms
FAH1475H	Picasso in View of Nanette
FAH1486H	Bloomsbury and Vorticism
FAH1489H	Re: Vision (Comparative Histories of the Senses)
FAH1490H	Photography and the Occult
FAH1495H	Art, Empire, Colonization
FAH1500H	Augmented Reality Art
FAH1756H	Acoustic Space
FAH1757H	Animal Images
FAH1758H	What Images Do: Approaches From South Asia
FAH1759H	Modern Architecture and Its Representations
FAH1820H	Modern Craft
FAH1870H	The Visual Arts in Canada in International Perspective
FAH1920H	Primitivism to Globalism: Theories of Otherness in Modern and Contemporary Arts
FAH1921H	GeoAesthetics
FAH1922H	Contemporary Art and Ethnography: Renewed Exchanges
FAH1934H	Cosmopolitan/Comparative Modernisms
FAH1935H	Contemporary Art Practices and the Modernist Archive
FAH1940H	Photography and Humour
FAH1951H	Contemporary Chinese Art and its Discontents
FAH1960H	Indigenous Art, Land, and Material Relations in the Great Lakes
FAH1961H	Art and Activism
FAH1965H	The Sixties Revisited

Reading Courses

Course Code	Course Title
FAH3000H	Special Studies in History of Art
FAH3011H	Readings in Ancient Art
FAH3012H	Readings in Medieval Art
FAH3013H	Readings in Renaissance and Baroque Art
FAH3014H	Readings in Modern and Contemporary Art
FAH5000Y	Comprehensive Examinations and Dissertation Topic Reading Course

Undergraduate/Graduate Courses

Periodically, the department may offer fourth-year undergraduate courses that have been recognized for graduate credit. Please visit the departmental website and discuss with the Graduate Coordinator.

Relevant Courses in Other Departments

Course Code	Course Title
EAS1229H	Topics in Chinese Aesthetics
EAS1339H	Topics in Chinese Art Theories

Course Code	Course Title
MSL2240H	The Photographic Record

Astronomy and Astrophysics

Astronomy and Astrophysics: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Astronomy and Astrophysics

MSc and PhD

Overview

The David A. Dunlap Department of Astronomy and Astrophysics is actively engaged in a wide range of observational and theoretical research on solar system dynamics, stars, stellar systems, the interstellar medium, the Galaxy, galaxies, quasars, clusters of galaxies, cosmology, and problems in general relativity. The department has close ties with the Canadian Institute for Theoretical Astrophysics (CITA) and the Dunlap Institute for Astronomy and Astrophysics (Dunlap). These ties provide great flexibility to students with a broad array of interests, giving them the option to work with a supervisor from one of these sibling units, and further enhance the opportunities for students to interact with leading researchers.

Faculty and students use the major optical, radio, and satellite observing facilities of the world are engaged in many large survey projects. Of particular importance are the national facilities: the Canada France-Hawaii optical telescope, the James Clerk Maxwell radio telescope, and the Gemini telescopes located at the world's finest observing sites.

The department has an active experimental program using telescopes on long-duration stratospheric balloons and a complementary program designing and building instrumentation for large optical telescopes, and for cosmological and Galactic research.

There are approximately 100 faculty, postdoctoral fellows, graduate students, and staff in the Department of Astronomy and Astrophysics, CITA, and Dunlap. Students benefit from direct interactions with the broad range of external speakers invited to weekly seminar programs and colloquia.

Contact and Address

Web: www.astro.utoronto.ca
Email: grad.sec@astro.utoronto.ca
Telephone: (416) 946-5243
Fax: (416) 946-7287

David A. Dunlap Department of Astronomy and Astrophysics
University of Toronto
50 St. George Street
Toronto, Ontario M5S 3H4
Canada

Astronomy and Astrophysics: Graduate Faculty

Full Members

Abraham, Roberto - BSc, DPhil, FRSC ***(Chair and Graduate Chair)***
Artymowicz, Pawel - MS, PhD
Bond, J. Richard - BSc, MS, PhD, FRS, FRSC
Bovy, Jo - MMath, PhD, CRC ***(Associate Chair, Graduate)***
Bryan, Marta - BA, MA, PhD
Fishbach, Maya - PhD
Gaensler, Bryan - PhD, CRC
Hlozek, Renee - PhD
Li, Ting - PhD
Lowman, Julian - BSc, MS, DPhil
Martin, Peter - BSc, MSc, PhD, FRSC, OC
Matzner, Christopher - BA, MA, PhD
Mena Parra, Juan - PhD, PhD
Menou, Kristen - BSc, MS, ScD
Moon, Dae-Sik - BS, MS, PhD
Murray, Norman - BSc, PhD, CRC
Netterfield, C. Barth - BSc, PhD
Pen, Ue-Li - BSc, PhD
Rein, Hanno - MS, DPhil
Ripperda, Bart - BSE, MSc, PhD
Rousseau-Nepton, Laurie - PhD
Sivanandam, Suresh - PhD ***(Director)***
Speagle, Joshua - MA, PhD
Thompson, Christopher - BSc, PhD
Tremaine, Scott - PhD
Valencia, Diana - BS, MS, ScD
van Kerkwijk, Marten - MA, PhD
Vanderlinde, Keith - PhD
Wu, Yanqin - PhD

Members Emeriti

Carlberg, Raymond - BSc, MS, PhD
Lester, John - BA, MS, PhD
Yee, Howard - BASc, PhD, FRSC

Associate Members

Essick, Reed - BSc, PhD
Friesen, Rachel Katherine - PhD
Reid, Michael - BSc, MSc, PhD

Astronomy and Astrophysics: Astronomy and Astrophysics MSc

MSc Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Astronomy and Astrophysics' additional admission requirements stated below.
- Applicants must hold an appropriate bachelor's degree with high academic standing from a recognized university.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Because many universities do not offer extensive undergraduate training in astronomy and astrophysics, preparation in physics and mathematics is an acceptable background.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **2.0 required full-course equivalents (FCEs)**: AST1501Y *Introduction to Research* and AST1500Y *Directed Research*, with different supervisors. Students are immediately engaged in original research throughout these two required research courses. An oral exam by committee is held for each. AST1501Y is normally completed during the Fall/Winter of Year 1, and AST1500Y is completed in the following Summer session.
- Students must complete a minimum of **1.5 FCEs (three half courses)** from the AST preparatory, elective, or specialized courses. More courses may be taken for credit or audited as appropriate.
- Students are expected to attend the weekly general colloquium conducted by the department.
- **Residence.** Students are normally expected to be on campus full-time for the duration of the program.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

Astronomy and Astrophysics: Astronomy and Astrophysics PhD

The Department of Astronomy and Astrophysics offers dynamic and competitive doctoral programs which emphasize research.

Students may be accepted into the **Doctor of Philosophy (PhD) program** via one of two routes: 1) following completion of an appropriate master's degree or 2) direct entry following completion of a bachelor's degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Astronomy and Astrophysics' additional admission requirements stated below.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Applicants may be accepted into the PhD program following completion of an MSc degree in Astronomy and Astrophysics from the University of Toronto, or an MSc degree in another appropriate discipline or from elsewhere deemed equivalent, with an average of at least B+ or demonstrated comparable research competence.

Completion Requirements

- There is no minimum course requirement in the four-year program except for **courses** deemed necessary by the student's PhD supervisory or qualifying examination committees.
- Students register in the **AST4000Y *Research* course series** (in sequence of the last digit: 2, 3, etc.) beginning in the Summer session of Year 1 and continue through the sequence through Year 4. The first registration, AST4002Y, corresponds to the qualifying examinations. The series continues with registration each Fall/Winter, starting with AST4003Y and is incremented by one digit each subsequent academic year. This registration is tied to thesis research progress, which is assessed based on the two required annual PhD supervisory committee meetings in October and April.
- Students must successfully complete the two parts of the **PhD qualifying examinations**: literature-based and thesis proposal. Both are oral examinations conducted by a panel of faculty members.
  - The **literature-based section** evaluates the student's mastery of general astronomy and astrophysics and ability to apply that knowledge to understand relevant research literature.
  - The **thesis proposal section** evaluates the feasibility and value of the proposed thesis and verifies that the student has sufficient preparation in the relevant research area. It is based in part on a written summary of the proposed thesis provided by the student to the examiners.

The literature qualifying examinations are taken in parallel with the corresponding graduate course offering, with completion of the four sections by the end of Year 1. The thesis proposal examination is taken in the Summer session of Year 1.

Students who fail at the first attempt have the opportunity to retake the examinations once, by the deadline of January 31 of Year 2.

- A **thesis** embodying the results of original research, which must be submitted for appraisal in accordance with the regulations of the School of Graduate Studies.
- Students are expected to attend the **weekly general colloquium** conducted by the department.
- **Residence.** Students are normally expected to be on campus full-time for the duration of the program.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Astronomy and Astrophysics' additional admission requirements stated below.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Students are accepted into the PhD program following completion of a bachelor's degree, with an average in the final two years equivalent to a University of Toronto A– or better from a recognized university.
- Because many universities do not offer extensive undergraduate training in astronomy and astrophysics, preparation in physics and mathematics is an acceptable background.

Completion Requirements

- **Coursework.** Students must successfully complete **2.0 full-course equivalents (FCEs)**: AST1500Y and AST1501Y, with different supervisors. Students are immediately engaged in original research throughout these two required research courses. AST1501Y is normally completed during the Fall/Winter of Year 1, and AST1500Y is completed in the following Summer session. An oral exam by committee is held for each.
- Students must complete a minimum of **2.5 FCEs (five half courses)** from the AST preparatory, elective, or specialized courses. Students may petition the associate chair, graduate to include courses offered by a cognate department at the equivalent level. (A maximum of 1.0 FCE may be substituted.) More courses may be taken for credit or audited as appropriate.
- Students register in the **AST4000Y *Research* course series** (in sequence of the last digit: 2, 3, etc.) beginning in the Summer session of Year 2 and continue the sequence through Year 5. The first registration, AST4002Y, corresponds to the qualifying examinations. The series continues with registration each Fall/Winter, starting with AST4003Y and is incremented by one digit each subsequent academic year. This registration is tied to thesis research progress, which is assessed based on the two required annual PhD supervisory committee meetings in October and April.
- Students must successfully complete the two parts of the **PhD qualifying examinations**: literature-based and thesis proposal. Both are oral examinations conducted by a panel of faculty members.
  - The **literature-based section** evaluates the student's mastery of general astronomy and astrophysics and ability to apply that knowledge to understand relevant research literature.
  - The **thesis proposal section** evaluates the feasibility and value of the proposed thesis and verifies that the student has sufficient preparation in the relevant research area. It is based in part on a written summary of the proposed thesis provided by the student to the examiners.

  The literature qualifying examinations are taken in parallel with the corresponding graduate course offering, with completion of the four sections by the end of Year 2. The thesis proposal examination is taken in the Summer session of Year 2. Students who fail at the first attempt have the opportunity to retake the examinations once, by the deadline of January 31 of Year 3.
- A **thesis** embodying the results of original research, which must be submitted for appraisal in accordance with the regulations of the School of Graduate Studies.
- Students are expected to attend the **weekly general colloquium** conducted by the department.
- **Residence.** Students are normally expected to be on campus full-time for the duration of the program.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Astronomy and Astrophysics: Astronomy and Astrophysics MSc, PhD Courses

Preparatory Courses

Course Code	Course Title
AST1410H	Stars
AST1420H	Galactic Structure and Dynamics
AST1430H	Cosmology
AST1440H	Radiation Processes and Gas Dynamics

Research Courses

Course Code	Course Title
AST1500Y	Directed Research
AST1501Y	Introduction to Research
AST4002Y	Research
AST4003Y	Research
AST4004Y	Research
AST4005Y	Research

Elective Courses

Course Code	Course Title
AST2010H	Physics of Stellar Atmospheres
AST2020H	Physics of Stellar Interiors
AST2040H	Extragalactic Astronomy
AST2050H	Observational Techniques

Specialized Courses

Course Code	Course Title
AST3011H	Advanced Topics in Stellar and Galactic Astronomy II
AST3020H	Advanced Topics in Interstellar Matter and Star Formation I
AST3030H	Advanced Topics in Extragalactic Astronomy and Cosmology I
AST3031H	Advanced Topics in Extragalactic Astronomy and Cosmology II
AST3040H	Advanced Topics in Planetary Science
AST3050Y	Theoretical Cosmology
AST3100H	Lecture Series in Specialized Topics
AST3101H	Specialized Topics in Astronomy and Astrophysics
JAS1101H	Topics in Astrostatistics

Biochemistry

Biochemistry: Introduction

Faculty Affiliation

Medicine

Degree Programs

Biochemistry

MSc and PhD

Combined Degree Programs

MD / PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Biomedical Engineering** (admissions have been administratively suspended)
  - Biochemistry, MSc, PhD
- **Developmental Biology**
  - Biochemistry, MSc, PhD
- **Genome Biology and Bioinformatics**
  - Biochemistry, PhD
- **Neuroscience**
  - Biochemistry, MSc, PhD

Overview

Biochemistry is the study of the molecular events underlying biological processes. Consequently, it makes fundamental contributions to all disciplines concerned with living systems.

The Department of Biochemistry offers modern facilities for research in a wide variety of areas including the relationship between structure and biological function in proteins, nucleic acids, and lipids as well as complex multicomponent systems such as membranes and subcellular organelles.

Contact and Address

Web: biochemistry.utoronto.ca
Email: carrie.harber@utoronto.ca
Telephone: (416) 978-4815
Fax: (416) 946-8228

Department of Biochemistry
University of Toronto
Room 5207, Medical Sciences Building
Toronto, Ontario M5S 1A8 Canada

Biochemistry: Graduate Faculty

Full Members

Adeli, Khosrow - DipChem, MSc, PhD
Andrews, David - PhD
Angers, Stéphane - BSc, PhD
Attisano, Liliana - BSc, PhD
Bear, Christine - BSc, MSc, PhD
Brown, Grant - BSc, PhD
Chakrabartty, Avijit - BSc, MSc, PhD
Chan, Hue Sun - BSc, MA, PhD
Davidson, Alan Richard - BSc, PhD
Deber, Charles - BSc, PhD
Ensminger, Alexander - BS, PhD
Ernst, Oliver - PhD
Forman-Kay, Julie - BSc, PhD
Glover, John - BSc, MSc, PhD
Grinstein, Sergio - BSc, PhD
Harrington, Lea Anne - BSc, MSc, PhD ***(Chair and Graduate Chair)***
Houry, Walid - BS, MS, PhD
Howell, Lynne - BSc, PhD
Julien, Jean-Philippe - PhD
Kay, Lewis - PhD
Keeley, Frederick - BSc, PhD
Kelley, Shana - BA, PhD
Kim, Peter - PhD
Klip, Amira - ScD
Lee, Hyun - PhD
Lee, Warren - MD, PhD
Maxwell, Karen - PhD
Maynes, Jason T. - BSc, DrMed
McQuibban, Angus - BSc, MSc, PhD
Melnyk, Roman - PhD
Moraes, Trevor - BS, MSc, PhD ***(Graduate Coordinator)***
Muise, Aleixo - MD
Nodwell, Justin - PhD
Ohh, Michael - BSc, PhD
Palazzo, Alexander - PhD
Parkinson, John - BS, PhD
Pomes, Regis - PhD
Prive, Gil - BSc, PhD
Rand, Margaret - BSc, PhD
Reithmeier, Reinhart - BSc, PhD
Rini, James - BSc, PhD
Rotin, Daniela - BSc, MSc, PhD
Rubinstein, John - BSc, PhD, PhD
Schulze, Andreas - MD
Schuurmans, Carol - PhD
Sharpe, Simon J. - BSc, PhD
Sicheri, Frank - BSc, PhD
Smibert, Craig - BSc, PhD
Stagljar, Igor - BS, PhD
Steipe, Boris - MD, PhD
Trimble, William - BSc, PhD
Yip, Christopher - BSc, PhD

Members Emeriti

Anwar, Rashid - BSc, MSc, PhD
Baker, Robert - BSc, PhD
Gurd, James - BA, PhD
Isenman, David - BSc, BSc, PhD
Lane, Byron - BA, PhD
Lewis, Peter - BSc, PhD
Lingwood, Clifford - BSc, PhD
Marks, Alexander - MD, PhD
Moran, Laurence - BSc, PhD
Murray, Robert - MS, MD, MB, PhD
Pai, Emil - PhD
Painter, Robert - BSc, PhD
Robinson, Brian - BSc, PhD
Sarkar, Bibudhendra - BPhm, MPharm, PhD
Schachter, Harry - BA, MD, PhD
Segall, Jacqueline - BSc, PhD
Williams, David - BSc, MSc, PhD
Williams, George - BSc, DSc, DSc, FRSC

Associate Members

Andreopoulos, Stavroula - BSc, MSc, PhD
Lee, Nana Hyung-Ran - PhD
Norris, Michael - PhD
Patterson, Sian - PhD

Biochemistry: Biochemistry MSc

Students may begin the **Master of Science (MSc) program** in the Fall or Winter.

MSc Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Biochemistry's additional admission requirements stated below.
- Normally, a minimum B+ average in the last two years of study in an honours or specialist BSc program in biochemistry or molecular biology. Applicants with strong academic credentials in honours or specialist programs in disciplines related to biochemistry or molecular biology are also considered.
- Applicants arrange for personal reference forms from three individuals familiar with their academic performance.
- Applicants who obtained a degree outside Canada or the United States are generally required to have an MSc degree in Biochemistry or in a closely related subject area.
- Applicants whose primary language is not English and who graduated from a non-Canadian university where the language of instruction was not English must provide Test of English as a Foreign Language (TOEFL) and Test of Written English (TWE) scores:
  - paper-based TOEFL: minimum 580 score and 5 on the TWE
  - Internet-based TOEFL: minimum 93/120 score and 22/30 on the writing and speaking sections.
- In the absence of TOEFL results, an International English Language Testing System (IELTS) score of at least 7.0 (Academic) with at least 6.5 for each component is also acceptable.

Completion Requirements

Students must complete any courses that were a condition of acceptance.

- **Coursework.** Students must successfully complete a total of **1.5 full-course equivalents** (FCEs) as follows:
  - BCH2020Y *Seminar Course in Biochemistry Level 1*
  - BCH2101H *Scientific Skills for Biochemists*
  - at least 0.25 elective FCE
- Students must submit a **thesis** and successfully complete an **oral examination** on their research and related aspects of biochemistry.
- Normally, MSc students are expected to participate as full-time students and to maintain full-time status in their laboratories until thesis completion and final defence.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Biochemistry: Biochemistry PhD

Students are accepted into the **Doctor of Philosophy (PhD) program** via one of three routes: 1) following completion of an MSc degree in biochemistry or a cognate discipline; 2) transfer (reclassification) from the University of Toronto MSc program; or 3) following completion of a BSc degree (direct entry) if, in the opinion of the Biochemistry Graduate Committee, the student has an outstanding academic record.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Biochemistry's additional admission requirements stated below.
- Applicants must arrange for personal reference forms from three individuals familiar with their academic performance.
- Applicants are generally required to have an MSc degree in biochemistry or in a closely related subject area with high academic standing.
- Applicants whose primary language is not English and who graduated from a non-Canadian university where the language of instruction was not English must provide Test of English as a Foreign Language (TOEFL) and Test of Written English (TWE) scores:
  - paper-based TOEFL: minimum 580 score and 5 on the TWE

    - Internet-based TOEFL: minimum 93/120 score and 22/30 on the writing and speaking sections.
- In the absence of TOEFL results, an International English Language Testing System (IELTS) score of at least 7.0 (Academic) with at least 6.5 for each component is also acceptable.

Completion Requirements

Students must complete any courses that were a condition of acceptance.

- **Coursework.** Students must successfully complete a total of **2.0 full-course equivalents (FCEs)** as follows:
    - BCH2022Y *Seminar Course in Biochemistry Level 2*
    - BCH2101H *Scientific Skills for Biochemists*. If previously taken students must take a substitute 0.25 FCE course approved by the graduate coordinator.
    - 0.75 elective FCE
- Students must successfully complete a **qualifying examination** within the first 24 months (ideally 18 months) of the program. To be eligible to write this qualifying examination, students must:
    - complete BCH2101H
    - be concurrently registered in BCH2022Y
    - complete at least 0.25 elective FCE; after completing the qualifying examination, students must complete the remaining 0.5 elective FCE.
- Submit a **thesis** and defend it at the **Doctoral Final Oral Examination**.
- Normally, PhD students are expected to participate as full-time students and to maintain full-time status in their laboratories until thesis completion and final defence.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- Transfer applicants must be enrolled in the MSc program in Biochemistry. Excellent students with high academic standing, who have clearly demonstrated the ability to do research at the doctoral level, may be considered for transfer to the PhD program. Recommendation by the student's supervisory committee is required.
- Transfer applicants must successfully complete a **reclassification (transfer) examination** within 18 to 24 months of starting the program.

Completion Requirements

Students must complete any courses that were a condition of acceptance.

- **Coursework.** Students must successfully complete a total of **3.5 full-course equivalents (FCEs)** as follows:
    - BCH2020Y *Seminar Course in Biochemistry Level 1*
    - BCH2022Y *Seminar Course in Biochemistry Level 2*
    - BCH2101H *Scientific Skills for Biochemists*
    - 1.25 elective FCEs.
- To be eligible to write the **reclassification examination**, students must:
    - complete BCH2101H
    - be concurrently registered in BCH2022Y
    - complete at least 0.25 elective FCE; after completing the reclassification examination, students must complete the remaining 1.0 elective FCE.
- Submit a **thesis** and defend it at the **Doctoral Final Oral Examination**.
- Normally, PhD students are expected to participate as full-time students and to maintain full-time status in their laboratories until thesis completion and final defence.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Direct entry is available to highly qualified BSc graduates who completed a Biochemistry specialist program or an appropriate undergraduate program in the life sciences from a recognized university, with a minimum A average in the final two years and relevant research experience.
- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Biochemistry's additional admission requirements stated below.
- Applicants must arrange for personal reference forms from three individuals familiar with their academic performance.
- Applicants who obtained a degree outside Canada or the United States are generally required to have an MSc degree in biochemistry or in a closely related subject area with high academic standing.
- Applicants whose primary language is not English and who graduated from a non-Canadian university where the language of instruction was not English must provide Test of English as a Foreign Language (TOEFL) and Test of Written English (TWE) scores:
    - paper-based TOEFL: minimum 580 score and 5 on the TWE
    - Internet-based TOEFL: minimum 93/120 score and 22/30 on the writing and speaking sections.
- In the absence of TOEFL results, an International English Language Testing System (IELTS) score of at least 7.0 (Academic) with at least 6.5 for each component is also acceptable.

Completion Requirements

Students must complete any courses that were a condition of acceptance.

- **Coursework.** Students must successfully complete a total of **3.5 full-course equivalents (FCEs)** as follows:
    - BCH2020Y *Seminar Course in Biochemistry Level 1*

    - BCH2022Y *Seminar Course in Biochemistry Level 2*
    - BCH2101H *Scientific Skills for Biochemists*
    - 1.25 elective FCEs
- Students must successfully complete a **qualifying examination** within 18 to 24 months of the program. To be eligible to write this qualifying examination, students must:
    - complete BCH2101H
    - be concurrently registered in BCH2020Y
    - complete at least 0.25 elective FCE; after completing the qualifying exam, students must complete the remaining 1.0 elective FCE.
- Submit a **thesis** and defend it at the **Doctoral Final Oral Examination**.
- Normally, PhD students are expected to participate as full-time students and to maintain full-time status in their laboratories until thesis completion and final defence.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Biochemistry: Biochemistry MSc, PhD Courses

For course details and availability, consult the Biochemistry website.

Course Code	Course Title
BCH2020Y	Seminar Course in Biochemistry Level 1
BCH2022Y	Seminar Course in Biochemistry Level 2
BCH2024H	Focused Topics in Biochemistry
JBB2025H	Protein Crystallography — Lectures
JBB2026H	Protein Structure, Folding, and Design
JBL1507H	Biochemistry of Inherited Disease
JNP1017H	Current Topics in Molecular and Biochemical Toxicology
JNP1018H	Molecular and Biochemical Basis of Toxicology
JNR1444Y	Fundamentals of Neuroscience: Cellular and Molecular

Modular Courses

Each modular course is worth 0.25 full-course equivalent (FCE).

Course Code	Course Title
BCH2101H	Scientific Skills for Biochemists
BCH2102H	Biomolecular Dynamics and Function
BCH2103H	Current Topics in Prion Biology
BCH2104H	The Biochemistry of Translational Medicine
BCH2105H	Cystic Fibrosis: The Cause, The Treatment
BCH2106H	Membrane Proteomics in Biomedical Research
BCH2107H	Introduction to Biomolecular Simulations
BCH2109H	Current Topics in Therapeutic Antibodies
BCH2110H	Eukaryotic Signaling
BCH2111H	Post-transcriptional Control of Gene Expression
BCH2112H	From Chaperones to CRISPR-Cas: the Incredible Genius of Phages
BCH2113H	Advances in Precision Medicine
BCH2114H	Frontiers in Drug Discovery
BCH2115H	Applying Modern Evolutionary Thinking to Biochemistry, Cell, and Molecular Biology
BCH2116H	Electron Paramagnetic Resonance Spectroscopy in Modern Life Sciences
BCH2119H	Advances in Epigenetics
BCH2120H	Studies of Tissue Barriers: Regulation of Phenotype and Transport Across the Epithelium and Endothelium
BCH2121H	Lipid Metabolism in Health and Disease: Mechanisms of Diabetic Dyslipidemia in Obesity and Type 2 Diabetes
BCH2122H	The Use of High Content Screening in Biomolecular Medicine
BCH2123H	Protein Structure Prediction and Homology Modelling
BCH2124H	Molecular Chaperones and Cellular Protein Homeostasis
BCH2125H	Structure and Dynamics of Biomacromolecules Using Solid State NMR Spectroscopy
BCH2126H	Subcellular Social Networks: Inter-Organelle Contact Sites
BCH2127H	Advances in Optical Microscopy: From Single Molecules to Four-Dimensional Imaging
BCH2128H	Scientific Thinking and Practice
BCH2129H	Genome Instability: Basic Science to Human Disease
BCH2130H	Cancer Biology
BCH2131H	Genomics of Infectious Disease
BCH2132H	Modelling Human Diseases from Cells to Organoids
BCH2133H	Tyrosine Kinase Signaling

Course Code	Course Title
BCH2134H	Cytoskeletal Dynamics
BCH2135H	Mitochondria and Metabolism in Human Health and Disease
BCH2136H	Biological Condensates
BCH2137H	Bug v. Host
BCH2138H	Advanced Electron Microscopy
BCH2139H	Islet Biology I: Gene to Cell to Organ to Disease
BCH2140H	Islet Biology II: Beyond Glucose Control: Molecular Targets, Diagnostics and Cutting-Edge Technologies
BCH2141H	Advanced Methods in Biomolecular Interactions
BCH2142H	Special Topics A
BCH2143H	Special Topics B
BCH2200H	Design Thinking for Scientists
BCH2201H	Professional Development
BCH2202H	Intro Programming in R
BCH2203H	Intro Programming in Python
BCH2204H	Advanced Programming in R
BCH2205H	Advanced Programming in Python
BCH2206H	Interdisciplinary Science
BCH2207H	Collaborative Science: Student Centered Interdisciplinary Studies

Biomedical Engineering

Biomedical Engineering: Introduction

Faculty Affiliation

Applied Science and Engineering

Degree Programs

Biomedical Engineering

MASc

- Fields (admissions have been administratively suspended):
  - Biomaterials, Tissue Engineering and Regenerative Medicine;
  - Engineering in a Clinical Setting;
  - Nanotechnology, Molecular Imaging and Systems Biology;
  - Neural/Sensory Systems and Rehabilitation

MEng

- Fields (admissions have been administratively suspended):
  - Biomaterials, Tissue Engineering and Regenerative Medicine;
  - Engineering in a Clinical Setting;
  - Nanotechnology, Molecular Imaging and Systems Biology;
  - Neural/Sensory Systems and Rehabilitation
- Emphases:
  - Engineering and Globalization;
  - Entrepreneurship, Leadership, Innovation and Technology (ELITE);
  - Forensic Engineering

PhD

- Fields (admissions have been administratively suspended):
  - Biomaterials, Tissue Engineering and Regenerative Medicine;
  - Clinical Engineering;
  - Engineering in a Clinical Setting;
  - Nanotechnology, Molecular Imaging and Systems Biology;
  - Neural/Sensory Systems and Rehabilitation

Clinical Engineering

MHSc (admissions have been administratively suspended)

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Cardiovascular Sciences**
  - Biomedical Engineering, MASc, PhD
- **Developmental Biology**
  - Biomedical Engineering, MASc, PhD
  - Clinical Engineering, MHSc
- **Genome Biology and Bioinformatics**
  - Biomedical Engineering, PhD
- **Musculoskeletal Sciences**
  - Biomedical Engineering, MASc, PhD
- **Neuromodulation**
  - Biomedical Engineering, MASc, PhD
- **Neuroscience**
  - Biomedical Engineering, MASc, PhD
  - Clinical Engineering, MHSc
- **Resuscitation Sciences** (admissions have been administratively suspended)
  - Biomedical Engineering, PhD
  - Clinical Engineering, MHSc
- **Robotics**
  - Biomedical Engineering, MASc, PhD

Overview

The Institute of Biomedical Engineering (IBME) offers facilities for research in biomedical engineering and for three educational programs leading to master's and doctoral degrees.

Biomedical engineering is a multidisciplinary field that integrates engineering and biology/medicine. It uses methods, principles, and tools of engineering, physical sciences, and mathematics to solve problems in the medical and life sciences for the study of living systems; the enhancement and replacement of those systems; the design and construction of systems to measure basic physiological parameters; the development of instruments, materials, and techniques for biological and medical practice; and the development of artificial organs and other medical devices. By its nature, the majority of the institute's work is interdisciplinary.

Contact and Address

Institute of Biomedical Engineering Academic Programs Office

Web: bme.utoronto.ca
Email: contact.bme@utoronto.ca

Institute of Biomedical Engineering
University of Toronto
Room 407, Rosebrugh Building
164 College Street
Toronto, Ontario M5S 3G9
Canada

MASc Program

Telephone: (416) 978-4841

PhD Program

Telephone: (416) 978-4841

MEng Program

Telephone: (416) 978-7209

Biomedical Engineering: Graduate Faculty

Full Members

Audet, Julie - MASc, PhD
Aung, Aereas - BS, PhD
Bardakjian, Berj - BSc, BEd, MASc, PhD
Biddiss, Elaine Alisa - MASc, PhD
Carlen, Peter - MD
Carneiro, Karina - BSc, PhD
Chan, Warren - BSc, PhD
Chau, Tom - PhD
Chen, Jean - PhD
Cheng, Hai-Ling - BSc, MS, PhD
Cheyne, Douglas - BSc, MA, PhD
Chou, Leo - PhD
Chow, Chung-Wai - MD, PhD
Davies, John - BSc, BDSc, PhD, DSc ***(Associate Director, Graduate Program)***
Diller, Eric David - BS, MS, PhD
Drake, James McKenzie - BSE, MBChB, MSc
Fernandez-Gonzalez, Rodrigo - BSc, PhD
Fernie, Geoffrey - BSc, PhD
Finer, Yoav - MSc, MSc, DMD, PhD
Franklin, Daniel - PhD
Gilbert, Penney - PhD
Griffiths, John - BSc, MSc, PhD
Grynpas, Marc - MSc, PhD
Gu, Frank - BSc, PhD
Guerguerian, Anne Marie - MD
Haider, Masoom - BM, MD
Ibrahim, George - BS, MD, PhD
Kahrs, Lueder Alexander - MSc, PhD
Khan, Omar F. - PhD
Khan, Shehroz Saeed - PhD
Kumacheva, Eugenia - MSc, PhD
Kushki, Azadeh - DrEng
Laflamme, Michael - BS, MD, PhD
Lan, Freeman - BS, PhD
Lankarany, Milad - PhD
Levi, Ofer - BSc, MSc, PhD
Maikawa, Caitlin - BASc, PhD
Matsuura, Naomi - ME, PhD
McGuigan, Alison - MEng, PhD
Mihailidis, Alex - BASc, MASc, PhD
Milosevic, Luka - PhD
Montenegro Burke, Rafa - MSD
Naguib, Hani - BSc, ME, PhD, PEng
Popovic, Milos - DipIng, PhD ***(Director)***
Prescott, Steven - BSc, MSc, MD, PhD
Radisic, Milica - BEng, PhD
Rocheleau, Jonathan - BSc, PhD
Santerre, Paul - BSc, MSc, PhD
Sefton, Michael - BASc, ScD
Shoichet, Molly - PhD
Simmons, Craig - BSc, MSc, PhD
Sone, Eli - BSc, MS, PhD
Sun, Yu - BS, MS, MS, PhD
Taati, Babak - PhD
Triverio, Piero - BScEE, MS, PhD
Truong, Kevin - BASc, PhD
Tsoi, Kim - BASc, MD, PhD
Valiante, Taufik - BSc, MD, PhD
Wheeler, Aaron - BS, PhD
Whyne, Cari - BSc, PhD
Wong, Willy - BSc, MSc, PhD
Yadollahi, Azadeh - DrEng
Yasufuku, Kazuhiro - DrMed, PhD
Yee, Albert - MSc, LMCC, MD
Yip, Christopher - BSc, PhD
Yoo, Paul - BASc, MSc, PhD
You, Lidan - BS, MS, PhD
Zandstra, Peter - BEng, PhD

Members Emeriti

Cobbold, Richard - PhD
Dolan, Alf - BSc, MSc
Frecker, Richard - BSc, MD, PhD
Kunov, Hans - MSc, PhD
Norwich, Kenneth - MSc, PhD
Pilliar, Robert - BASc, PhD

Associate Members

Bouwmeester, Chris - PhD
Kilkenny Rocheleau, Dawn - PhD
Labouta, Hagar - BSc, MSc, PhD
Li, Bowen - BScPhm, PhD
Podolsky, Dale - BS, BE, MD, PhD
Steinman, David - BASc, MASc, PhD

Biomedical Engineering: Biomedical Engineering MASc

The **Master of Applied Science (MASc) program** is a research-stream, thesis-based program which provides a strong academic foundation for students who want to become immersed in the discipline of biomedical engineering. This program is designed to offer students challenging and rewarding research opportunities within the context of using engineering principles to enhance the quality of our health-care system.

The MASc program is offered in the fields of 1) Biomaterials, Tissue Engineering and Regenerative Medicine; 2) Engineering in a Clinical Setting; 3) Nanotechnology, Molecular Imaging and Systems Biology; and 4) Neural/Sensory Systems and Rehabilitation. **Note: admissions to the MASc fields have been administratively suspended; however, the program remains open to new enrolments.**

MASc Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the institute's additional admission requirements stated below.
- A bachelor's degree in dentistry, engineering, medicine, or one of the physical or biological sciences from a recognized university with a minimum academic standing of mid-B or 3.0 grade point average (GPA) in the final two years of study or over senior-level courses.

Completion Requirements

- **Coursework.** The program normally comprises **at least 2.0 full-course equivalents (FCEs)** including:
  - Two of the following (1.0 FCE):
    - BME1477H *Biomedical Engineering Project Design and Execution*
    - BME1478H *Coding for Biomedical Engineers*
    - BME1479H *Statistical Discovery Techniques for Biomedical Researchers*
  - Two half-course electives relevant to the student's area of research (1.0 FCE).
- Students must participate in:
  - Either BME1010H or BME1011H *Graduate Seminar* series.
  - JDE1000H *Ethics in Research*.
  - Health and safety training workshops.
- Successful completion of a **research thesis** in at least one of the biomedical engineering research fields: 1) Biomaterials, Tissue Engineering and Regenerative Medicine; 2) Engineering in a Clinical Setting; 3) Nanotechnology, Molecular Imaging and Systems Biology; and 4) Neural/Sensory Systems and Rehabilitation.

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW)
Time Limit: 3 years full-time

Biomedical Engineering: Biomedical Engineering MEng

The **Master of Engineering (MEng) program** is an accelerated, professional program with a focus on the design and commercialization of biomedical devices. Students will have the opportunity to take on applied design challenges and meet the growing demands of this industry through a four-month practical experience through internships, research projects, or practical course activities.

The MEng program is offered in the fields of 1) Biomaterials, Tissue Engineering and Regenerative Medicine; 2) Engineering in a Clinical Setting; 3) Nanotechnology, Molecular Imaging and Systems Biology; and 4) Neural/Sensory Systems and Rehabilitation. **Note: admissions to the MEng fields have been administratively suspended; however, the program remains open to new enrolments.**

The MEng program can be taken on a full-time, extended full-time, or part-time basis.

MEng Program (Full-Time and Part-Time Options)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy IBME's additional admission requirements stated below.
- A four-year bachelor's degree in engineering, medicine, dentistry, or one of the physical or biological sciences from a recognized university, with at least a mid-B average (3.0 grade point average [GPA]) in the final two years of study or over senior-level courses.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **5.0 full-course equivalents (FCEs)** as follows:
  - At least 2.0 FCEs in biomedical engineering courses; these include all BME and joint BME course offerings.
  - At least 1.0 FCE in commercialization and entrepreneurship courses such as BME1800H, BME1801H, BME1802H, and BME1405H. Completion of either BME1800H or BME1801H is required for graduation.
  - A 1.0 FCE *Practical Experience in Applied Research* course in biomedical device development, usually over one session for a full-time placement (BME1899Y) or over three sessions for a part-time placement (BME1898Y). The placement must be in at least one of the following biomedical engineering research fields: 1) Biomaterials, Tissue Engineering and Regenerative Medicine; 2) Engineering in a Clinical Setting; 3) Nanotechnology, Molecular Imaging and Systems Biology; or 4) Neural/Sensory Systems and Rehabilitation. The practical experience course can be taken in academic research and teaching laboratories, government institutions, health-care facilities, in the industry, or in health-care consulting firms.
  - The remaining 1.0 FCE can be two half courses in either biomedical engineering, commercialization and entrepreneurship, or any graduate-level course the student is interested in.
- All courses must be at the graduate level, which includes both 500- and 1000-level. Students can take a maximum of one 500-level course.
- Health and safety training workshops.
- Students have the option of completing an emphasis in Engineering and Globalization; Entrepreneurship, Leadership, Innovation and Technology in Engineering (ELITE); or Forensic Engineering as part of their degree program. Please see details in the Biomedical Engineering Emphases section.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 9 sessions part-time (typical registration sequence: FWS-FWS-FWS)
Time Limit: 2 years full-time; 6 years part-time

MEng Program (Extended Full-Time Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy IBME's additional admission requirements stated below.
- A four-year bachelor's degree in engineering, medicine, dentistry, or one of the physical or biological sciences from a recognized university, with at least a mid-B average (3.0 grade point average [GPA]) in the final two years of study or over senior-level courses.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **5.0 full-course equivalents (FCEs)** as follows:
  - At least 2.0 FCEs in biomedical engineering courses; these include all BME and joint BME course offerings.
  - At least 1.0 FCE in commercialization and entrepreneurship courses such as BME1800H, BME1801H, BME1802H, and BME1405H. Completion of either BME1800H or BME1801H is required for graduation.
  - A 1.0 FCE *Practical Experience in Applied Research* course in biomedical device development, usually over one session for a full-time placement (BME1899Y) or over three sessions for a part-time placement (BME1898Y). The placement must be in at least one of the following biomedical engineering research fields: 1) Biomaterials, Tissue Engineering and Regenerative Medicine; 2) Engineering in a Clinical Setting; 3) Nanotechnology, Molecular Imaging and Systems Biology; or 4) Neural/Sensory Systems and Rehabilitation. The practical experience course can be taken in academic research and teaching laboratories, government institutions, health-care facilities, in the industry, or in health-care consulting firms.
  - The remaining 1.0 FCE can be two half courses in either biomedical engineering, commercialization and entrepreneurship, or any graduate-level course the student is interested in.
- All courses must be at the graduate level, which includes both 500- and 1000-level. Students can take a maximum of one 500-level course.
- Health and safety training workshops.
- Students have the option of completing an emphasis in Engineering and Globalization; Entrepreneurship, Leadership, Innovation and Technology in Engineering (ELITE); or Forensic Engineering as part of their degree program. Please see details in the Biomedical Engineering Emphases section.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Biomedical Engineering: Biomedical Engineering PhD

The **Doctor of Philosophy (PhD) program** offers courses and a strong research thesis component. Students emerge from this program ready to pursue careers in academia, medicine, industry, and government. Students with a particular interest in conducting biomedical engineering research with a primary clinical focus may pursue a field in clinical engineering within the Biomedical Engineering PhD program.

Applicants may enter the PhD program via one of three routes: 1) following completion of an appropriate master's degree; 2) transfer from the University of Toronto MASc or MHSc program; or 3) direct entry following completion of an appropriate bachelor's degree.

Note: admissions to the PhD fields have been administratively suspended; however, the program remains open to new enrolments.

Fields: 1) Biomaterials, Tissue Engineering and Regenerative Medicine; 2) Engineering in a Clinical Setting; 3) Nanotechnology, Molecular Imaging and Systems Biology; 4) Neural/Sensory Systems and Rehabilitation

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the institute's additional admission requirements stated below.
- Applicants must have a master's degree in dentistry, engineering, medicine, or one of the physical or biological sciences with an overall average of at least B+ (3.3 grade point average [GPA]) from a recognized university.

Completion Requirements

- **Coursework.** Normally, students must complete **at least 1.0 full-course equivalents (FCEs)** including:
  - Two of the following (1.0 FCE):
    - BME1477H *Biomedical Engineering Project Design and Execution*;
    - BME1478H *Coding for Biomedical Engineers*; or
    - BME1479H *Statistical Discovery Techniques for Biomedical Researchers*.

- Students are also expected to pursue a **thesis topic** relevant to at least one of the following Biomedical Engineering research fields: 1) Biomaterials, Tissue Engineering and Regenerative Medicine; 2) Engineering in a Clinical Setting; 3) Nanotechnology, Molecular Imaging and Systems Biology; and 4) Neural/Sensory Systems and Rehabilitation.
- Within 12 months of registration, students must pass a **qualifying examination** covering the broad field of biomedical engineering appropriate to their background.
- Successful completion of a **thesis**, representing an original investigation in biomedical engineering.
- Students will continue to meet with their supervisory committee at least once every 12 months until recommendation for the **departmental oral examination** is made. On the recommendation of the supervisory committee and special approval from their department Graduate Chair or Coordinator, candidates have the opportunity to waive the departmental oral examination and proceed directly to the **Doctoral Final Oral Examination**.
- Students must participate in:
  - Either BME1010H or BME1011H *Graduate Seminar* series;
  - JDE1000H *Ethics in Research*;
  - Health and safety training workshops.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- Highly qualified master's students (MHSc students in Clinical Engineering or MASc students in any field) may be considered for transfer into the PhD program in any of the five fields. MASc and MHSc students who transfer to a PhD must fulfil the admission requirements listed under the specific field of the PhD program they are transferring to.

Completion Requirements

Program Requirements for MASc Transfer Students

- **Coursework.** Students who transfer from the MASc program in Biomedical Engineering must complete the total course requirements for both degrees: 2.0 full-course equivalents (FCEs) at the master's level plus 1.0 FCE at the PhD level, for **a total of 3.0 FCEs**:
  - Students must complete two of the following (1.0 FCE):
    - BME1477H *Biomedical Engineering Project Design and Execution*;
    - BME1478H *Coding for Biomedical Engineers*; or
    - BME1479H *Statistical Discovery Techniques for Biomedical Researchers*.
  - Elective courses relevant to the student's area of research (2.0 FCEs)

Program Requirements for MHSc Transfer Students

- **Coursework.** Students who transfer from the MHSc program in Biomedical Engineering must complete the total course requirements for both degrees: 4.0 FCEs at the master's level plus 1.0 FCE at the PhD level, for **a total of 5.0 FCEs**:
  - BME1405H *Clinical Engineering Instrumentation I* and BME1436H *Clinical Engineering Surgery*.
  - Students must complete two of the following (1.0 FCE):
    - BME1477H *Biomedical Engineering Project Design and Execution*;
    - BME1478H *Coding for Biomedical Engineers*; or
    - BME1479H *Statistical Discovery Techniques for Biomedical Researchers*.
  - Two half-course electives relevant to the student's area of research (1.0 FCE).
  - BME4444Y *Practical Experience Course* in health-care facilities, the medical device industry, or health-care consulting firms. The practical experience course must total a minimum of 625 hours.

All PhD Students

- Students are also expected to pursue a **thesis topic** relevant to at least one of the following Biomedical Engineering research fields: 1) Biomaterials, Tissue Engineering and Regenerative Medicine; 2) Engineering in a Clinical Setting; 3) Nanotechnology, Molecular Imaging and Systems Biology; and 4) Neural/Sensory Systems and Rehabilitation.
- Within 12 months of registration, students must pass a **qualifying examination** covering the broad field of biomedical engineering appropriate to their background.
- Successful completion of a **thesis**, representing an original investigation in biomedical engineering.
- Students will continue to meet with their supervisory committee at least once every 12 months until recommendation for the **departmental oral examination** is made. On the recommendation of the supervisory committee and special approval from their department Graduate Chair or Coordinator, candidates have the opportunity to waive the departmental oral examination and proceed directly to the **Doctoral Final Oral Examination**.
- Students must participate in:
  - Either BME1010H or BME1011H *Graduate Seminar* series;
  - JDE1000H *Ethics in Research*;
  - Health and safety training workshops.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the institute's additional admission requirements stated below.
- Direct entry with a bachelor's degree may be considered in exceptional circumstances. Applicants must have an undergraduate degree in dentistry, engineering, medicine, or one of the physical or biological sciences.

Completion Requirements

- **Coursework.** Normally, students must complete **3.0 full-course equivalent (FCE)** including:
  - Two of the following (1.0 FCE):
    - BME1477H *Biomedical Engineering Project Design and Execution*;
    - BME1478H *Coding for Biomedical Engineers*; or
    - BME1479H *Statistical Discovery Techniques for Biomedical Researchers*.
- Students are also expected to pursue a **thesis topic** relevant to at least one of the following Biomedical Engineering research fields: 1) Biomaterials, Tissue Engineering and Regenerative Medicine; 2) Engineering in a Clinical Setting; 3) Nanotechnology, Molecular Imaging and Systems Biology; and 4) Neural/Sensory Systems and Rehabilitation.
- Successful completion of a **thesis**, representing an original investigation in biomedical engineering.
- Students will continue to meet with their supervisory committee at least once every 12 months until recommendation for the **departmental oral examination** is made. On the recommendation of the supervisory committee and special approval from their department Graduate Chair or Coordinator, candidates have the opportunity to waive the departmental oral examination and proceed directly to the **Doctoral Final Oral Examination**.
- Students must participate in:
  - Either BME1010H or BME1011H *Graduate Seminar* series;
  - JDE1000H *Ethics in Research*;
  - Health and safety training workshops.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Biomedical Engineering: Biomedical Engineering PhD; Field: Clinical Engineering

The PhD program offers courses and a strong research thesis component. Students emerge from this program ready to pursue careers in academia, medicine, industry, and government. Students with a particular interest in conducting biomedical engineering research with a primary clinical focus may pursue a field in clinical engineering within the Biomedical Engineering PhD program.

Applicants may enter the PhD program via one of three routes: 1) following completion of an appropriate master's degree; 2) transfer from the University of Toronto MASc or MHSc program; or 3) direct entry following completion of an appropriate bachelor's degree.

Effective January 2021, admissions to this field have been administratively suspended.

Field: Clinical Engineering

Minimum Admission Requirements PhD Program

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the institute's additional admission requirements stated below.
- Applicants must have a master's degree in dentistry, engineering, medicine, or one of the physical or biological sciences with an overall average of at least B+ (3.3 grade point average [GPA]) from a recognized university.

Completion Requirements

- **Coursework.** Normally, students must complete **at least 1.0 full-course equivalent (FCE)** including:
  - Two of the following (1.0 FCE):
    - BME1477H *Biomedical Engineering Project Design and Execution*;
    - BME1478H *Coding for Biomedical Engineers*; or
    - BME1479H *Statistical Discovery Techniques for Biomedical Researchers*.
  - If a student does not have a formal degree in clinical engineering, 0.5 FCE from one of the BME clinical engineering courses (BME1405H, BME1436H, BME1439H, or BME4444Y) is required. A student who possesses protracted professional engineering experience (five or more years) will be exempt from this requirement.
- Students must (1) conduct their research in a clinical environment and (2) be co-supervised by both engineering and health science faculty. The primary supervisor must be BME-appointed; however, the co-supervisor could be from a clinical unit other than BME but must be appointed to SGS.
- Within 12 months of registration, students must pass a **qualifying examination** covering the broad field of biomedical engineering appropriate to their background.
- Successful completion of a **thesis**, representing an original investigation in biomedical engineering.
- Students will continue to meet with their supervisory committee at least once every 12 months until recommendation for the **departmental oral examination** is made. On the recommendation of the supervisory committee and special approval from their department Graduate Chair or Coordinator, candidates have the opportunity to waive the departmental oral examination

and proceed directly to the **Doctoral Final Oral Examination**.
- Students must participate in:
  - Either BME1010H or BME1011H *Graduate Seminar* series;
  - JDE1000H *Ethics in Research*;
  - Health and safety training workshops.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- Highly qualified master's students (MHSc students in Clinical Engineering or MASc students in any field) may be considered for transfer into the PhD program in any of the five research fields. To be eligible to transfer to the PhD, Clinical Engineering MHSc students must complete 3.0 full-course equivalents (FCEs) within the MHSc curriculum.
- MHSc students who transfer to a PhD in the field of Clinical Engineering must fulfil the PhD program requirements listed below. MHSc students who transfer to the other PhD fields must fulfil the program requirements of the PhD field as described in the applicable section.

Completion Requirements

Program Requirements for MASc Transfer Students

- **Coursework.** Students who transfer from the MASc program in Biomedical Engineering must complete the total course requirements for both degrees: 2.0 full-course equivalents (FCEs) at the master's level plus 1.0 FCE at the PhD level, for **a total of 3.0 FCEs**:
  - Students must complete two of the following (1.0 FCE):
    - BME1477H *Biomedical Engineering Project Design and Execution*;
    - BME1478H *Coding for Biomedical Engineers*; or
    - BME1479H *Statistical Discovery Techniques for Biomedical Researchers*.
  - Elective courses relevant to the student's area of research (2.0 FCE's).
  - If a student does not have a formal degree in clinical engineering, 0.5 FCE from one of the BME clinical engineering courses (BME1405H, BME1436H, BME1439H, or BME4444Y) is required. A student who possess protracted professional engineering experience (five or more years) will be exempt from this requirement.

Program Requirements for MHSc Transfer Students

- **Coursework.** Students who transfer from the MHSc program in Biomedical Engineering must complete the total course requirements for both degrees: 4.0 FCEs at the master's level plus 1.0 FCE at the PhD level, for **a total of 5.0 FCEs**:
  - BME1405 *Clinical Engineering Instrumentation* and BME1436 *Clinical Engineering Surgery*.
  - Students must complete two of the following (1.0 FCE):
    - BME1477H *Biomedical Engineering Project Design and Execution*;
    - BME1478H *Coding for Biomedical Engineers*; or
    - BME1479H *Statistical Discovery Techniques for Biomedical Researchers*.
  - Two half-course electives relevant to the student's area of research (1.0 FCE).
  - BME4444Y *Practical Experience Course* in health-care facilities, the medical device industry, or health-care consulting firms. The practical experience course must total a minimum of 625 hours.

All PhD Students

- Students must (1) conduct their research in a clinical environment and (2) be co-supervised by both engineering and health science faculty. The primary supervisor must be BME-appointed; however, the co-supervisor could be from a clinical unit other than BME but must be appointed to SGS.
- Within 12 months of registration, students must pass a **qualifying examination** covering the broad field of biomedical engineering appropriate to their background.
- Successful completion of a **thesis**, representing an original investigation in biomedical engineering.
- Students will continue to meet with their supervisory committee at least once every 12 months until recommendation for the **departmental oral examination** is made. On the recommendation of the supervisory committee and special approval from their department Graduate Chair or Coordinator, candidates have the opportunity to waive the departmental oral examination and proceed directly to the **Doctoral Final Oral Examination**.
- Students must participate in:
  - Either BME1010H or BME1011H *Graduate Seminar* series;
  - JDE1000H *Ethics in Research*;
  - Health and safety training workshops.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the institute's additional admission requirements stated below.
- Direct entry with a bachelor's degree may be considered in exceptional cases. Applicants must have an undergraduate degree in dentistry, engineering, medicine, or one of the physical or biological sciences.

Completion Requirements

- **Coursework.** Normally, students must complete **at least 3.0 full-course equivalent (FCE)** including:
  - Two of the following (1.0 FCE):
    - BME1477H *Biomedical Engineering Project Design and Execution*;
    - BME1478H *Coding for Biomedical Engineers*; or
    - BME1479H *Statistical Discovery Techniques for Biomedical Researchers*.
  - Elective courses relevant to the student's area of research (2.0 FCEs).
  - If a student does not have a formal degree in clinical engineering, 0.5 FCE from one of the BME clinical engineering courses (BME1405H, BME1436H, BME1439H, or BME4444Y) is required. A student who possesses protracted professional engineering experience (five or more years) will be exempt from this requirement.
- Students in the Clinical Engineering field must (1) conduct their research in a clinical environment and (2) be co-supervised by both engineering and health science faculty. The primary supervisor must be BME-appointed; however, the co-supervisor could be from a clinical unit other than BME but must be appointed to SGS.
- Within 12 months of registration, students must pass a **qualifying examination** covering the broad field of biomedical engineering appropriate to their background.
- Successful completion of a **thesis**, representing an original investigation in biomedical engineering.
- Students will continue to meet with their supervisory committee at least once every 12 months until recommendation for the **departmental oral examination** is made. On the recommendation of the supervisory committee and special approval from their department Graduate Chair or Coordinator, candidates have the opportunity to waive the departmental oral examination and proceed directly to the **Doctoral Final Oral Examination**.
- Students must participate in:
  - Either BME1010H or BME1011H *Graduate Seminar* series;
  - JDE1000H *Ethics in Research*;
  - Health and safety training workshops.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Biomedical Engineering: Clinical Engineering MHSc

The MHSc program educates students on how to apply and implement medical technologies to optimize modern health-care delivery. This professional degree program consists of academic courses and a research thesis and provides students with real-world exposure through a practical experience course with a private sector company, a hospital, or a research facility.

Effective January 1, 2021, admissions have been administratively suspended.

Master of Health Science

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the institute's additional admission requirements stated below.
- Selected students with a four-year bachelor's degree in engineering, medicine, dentistry, or one of the physical or biological sciences from a recognized university, with a mid-B (3.0 grade point average [GPA]) or higher in the final two years of study or over senior-level courses.

Completion Requirements

- **Coursework.** Students must normally complete **4.0 full-course equivalents (FCEs)** as follows:
  - BME1405H *Clinical Engineering Instrumentation I* and BME1436H *Clinical Engineering Surgery*.
  - Two of the following (1.0 FCE):
    - BME1477H *Biomedical Engineering Project Design and Execution*;
    - BME1478H *Coding for Biomedical Engineers*; or
    - BME1479H *Statistical Discovery Techniques for Biomedical Researchers*.
  - Two half-course electives relevant to the student's area of research (1.0 FCE).
  - BME4444Y *Practical Experience Course* in health-care facilities, the medical device industry, or health-care consulting firms. The practical experience course must total a minimum of 625 hours.
- Students must participate in:
  - Either BME1010H **or** BME1011H *Graduate Seminar* series **and**
  - JDE1000H *Ethics in Research*.
- Successful completion of a **thesis**.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Biomedical Engineering: Emphases

Engineering and Globalization

Participating Programs:

- Aerospace Science and Engineering MEng
- Biomedical Engineering MEng
- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Electrical and Computer Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete **four half courses (2.0 full-course equivalents [FCEs])** from the following lists, with at least two half courses (or one full course) taken from Group A.

Group A

APS510H1, APS530H1, APS1420H, JCR1000Y (full-year course).

Group B

APS1015H, APS1020H, APS1024H, CHL5700H, CIV1399H. Note: Students who choose to pursue an MEng project in their home department that aligns with the Centre for Global Engineering (CGEN)'s disciplinary focus, as deemed by the CGEN Director, may count the project as one required Group B course.

Students who complete the requirements of the emphasis in Engineering and Globalization and wish to obtain a notation on their transcript should contact the Faculty Graduate Studies office.

Entrepreneurship, Leadership, Innovation and Technology in Engineering

Participating Programs:

- Aerospace Science and Engineering MEng
- Biomedical Engineering MEng
- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Electrical and Computer Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete **any four of the following courses (2.0 full-course equivalents [FCEs])**:

Leadership

TEP1010H, TEP1011H, TEP1026H, TEP1027H, TEP1029H, TEP1030H, TEP1501H, TEP1502H, TEP1601H.

Entrepreneurship and Innovation

APS511H1, APS1012H, APS1013H, APS1015H, APS1023H, APS1033H, APS1035H, APS1036H, APS1041H, APS1061H, APS1088H.

Finance and Management

AER1601H, APS500H1, APS502H1, APS1001H, APS1004H, APS1009H, APS1016H, APS1017H, APS1020H, APS1022H, APS1028H, APS1032H, APS1043H, APS1049H, APS1050H, APS1051H, APS1052H.

Engineering and Society

APS510H1, APS1018H, APS1024H, APS1025H, APS1031H, APS1034H, APS1090H, APS1101H, APS1420H.

Forensic Engineering

Participating Programs:

- Biomedical Engineering MEng
- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete **four courses (one core course and three elective courses; 2.0 full-course equivalents [FCEs])**.

Core Course

MSE1031H *Forensic Engineering*.

Elective Courses

AER1604H,
APS1034H, APS1039H, APS1040H, APS1101H,
BME1480H, BME1800H, BME1801H, BME1802H,
CHE561H1, CHE568H1, CHE1213H, CHE1431H, CHE1432H, CHE1434H, CHE1436H,
CIV510H1, CIV518H1, CIV1163H, CIV1171H, CIV1174H, CIV1190H, CIV1201H, CIV1279H, CIV1282H, CIV1422H, CIV1429H,
JMB1050H,
JNC2503H,
MIE507H1, MIE533H1, MIE566H1, MIE1301H, MIE1303H, MIE1411H, MIE1414H, MIE1514H, MIE1616H, MIE1708H, MIE1714H, MIE1721H, MIE1727H, MIE1804H,
MSE1015H, MSE1016H, MSE1022H, MSE1032H, MSE1067H.

Biomedical Engineering: Biomedical Engineering MASc, MEng, PhD, Clinical Engineering MHSc Courses

Not all courses are offered every year. Students should contact the BME office for information about course availability. Outlines of these and other closely related courses may be obtained from the BME office.

Course Code	Course Title
BME1010H	Graduate Seminar
BME1011H	Graduate Seminar
BME1088H	Concepts in Immunoengineering

Course Code	Course Title
BME1405H	Clinical Engineering Instrumentation I
BME1436H	Clinical Engineering Surgery
BME1439H	Clinical Engineering Instrumentation II
BME1452H	Polymers for Biomedical Engineering
BME1453H	Genomics and Synthetic Nucleic-Acid Technologies
BME1454H	Regenerative Medicine: Fundamentals and Applications
BME1457H	Biomedical Nanotechnology
BME1459H	Protein Engineering
BME1460H	Quantitative Fluorescence Microscopy: Theory and Application to Live Cell Imaging
BME1462H	Biological Image Analysis
BME1466H	Advanced Topics on Magnetic Resonance Imaging
BME1471H	Rehabilitation Engineering
BME1472H	Fundamentals of Neuromodulation Technology and Clinical Applications
BME1473H	Acquisition and Processing of Bioelectric Signals
BME1477H	Biomedical Engineering Project Design and Execution
BME1478H	Coding for Biomedical Engineers
BME1479H	Statistical Discovery Techniques for Biomedical Researchers
BME1480H	Experimental Design and Multivariate Analysis in Bioengineering
BME1500H	Topics in Neuromodulation
BME1510H	Data Science for Biomedical Engineers
BME1520H	Applications of Universal Design for Preventing Injury
BME1530H	Robot Foundations and Programming for Biomedical Applications
BME1540H	Methodological Approaches to the Design and Testing of Gaming Technologies for Rehabilitation
BME1550H	Regenerative Medicine: Science, Manufacturing and Regulations
BME1560H	Artificial Intelligence for Biomedical Engineering
BME1570H	Introduction to Digital Health
BME1580H	Application of Digital Technologies for Chronic Cardio-respiratory Conditions
BME1800H	Biomedical Product Development I
BME1801H	Biomedical Product Development II
BME1802H	Applying Human Factors to the Design of Medical Devices
BME1898Y	Practical Experience in Applied Research PT
BME1899Y	Practical Experience in Applied Research FT
BME4444Y	Practical Experience Course
APS1043H	Writing Your Own Patent Application
CHE1334H	Organ-on-a-Chip Engineering
JCB1349H	Molecular Assemblies: Structure/Function/Properties
JEB1433H	Medical Imaging
JEB1444H	Neural Engineering
JEB1447H	Sensory Communications
JMB1050H	Biological and Bio-inspired Materials
JPB1022H	Human Physiology as Related to Engineering II
JPB1071H	Advanced Topics: Computational Neuroscience
JTC1331H	Biomaterials Science

Cell and Systems Biology

Cell and Systems Biology: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Cell and Systems Biology

MSc and PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Developmental Biology**
  - Cell and Systems Biology, MSc, PhD
- **Genome Biology and Bioinformatics**
  - Cell and Systems Biology, PhD
- **Neuroscience**
  - Cell and Systems Biology, MSc, PhD

Overview

Students undertaking graduate programs in the Department of Cell and Systems Biology pursue research related to fundamental mechanisms in the growth, development, and behaviour of organisms ranging from unicellular microbes to more complex organisms in the plant and animal kingdoms. Research projects extend from the molecular level to that of whole organisms interacting with each other and their environment.

Students enjoy state-of-the-art facilities and make use of cutting-edge approaches including functional genomics, genetics, metabolomics, proteomics, bioinformatics, computational biology, cell biology, developmental biology, molecular biology, and physiology.

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Toronto, Ontario M5S 3G5 Canada

Cell and Systems Biology: Graduate Faculty

Full Members

AbouHaidar, Mounir - DipdESup, BSc, PhD, CAP
Anreiter, Ina - BSc, MSc, PhD
Arruda Carvalho, Maithe - BSc, MSc, PhD
Berleth, Thomas - BSc, MSc, PhD
Bonin, Robert - BSc, PhD
Bruce, Ashley - BA, PhD
Buck, Leslie - BSc, PhD
Chang, Belinda - AB, PhD, CRC
Cheng, Mary - MSc, PhD
Christendat, Dinesh - PhD
Desveaux, Darrell - BSc, MSc, PhD
Edwards, Elizabeth - BEng, PhD
Ensminger, Ingo - PhD
Erclik, Teddy - BSc, PhD
Espie, George - PhD
Fernandez-Gonzalez, Rodrigo - BSc, PhD
Gan, Kathlyn - BSc, MSc, PhD
Gazzarrini, Sonia - BA, PhD
Gerlai, Robert - MSc, PhD
Gilbert, Penney - PhD
Gillis, Jesse - BSc, MSc, PhD
Godt, Dorothea - MS, DrRerNat
Goring, Daphne - PhD
Guttman, David - BS, PhD
Harris, Tony - BSc, PhD
Harrison, Rene - BS, MS, PhD
Holmes, Melissa - BA, MA, PhD
Ito Lee, Rutsuko - BA, PhD
Kanelis, Voula - PhD
Kim, Junchul - BSc, MSc, PhD
Koyama, Minoru - BA, MSc, PhD
Lange, Angela - BSc, PhD
Levine, Joel - BA, PhD
Lin, Qian - ScD
Liu, Baohua - BSc, MSc, PhD
Lovejoy, David - PhD
Lovejoy, Nathan Richard - BSc, MS, PhD
Lumba, Shelley - PhD
Martin, Loren - BSc, MSc, PhD
Mason, Andrew - MS, PhD
Master, Emma - BSc, PhD
McCourt, Peter - PhD
McFarlane, Heather - DSc
McGowan, Patrick - BSc, MA, PhD
McMillen, David - BSc, MS, PhD
Milstein, Josh - BS, PhD
Mitchell, Jennifer - DSc
Monks, Ashley - BSc, MA, PhD
Moses, Alan - BA, PhD
Nambara, Eiji - MS, PhD
Nash, Joanne - BS, MSc, PhD
Ness, Rob - BSc, PhD
Nguyen Ba, Alex - BSc, PhD
Orchard, Ian - BSc, PhD, DSc
Pan, Xue - BASc, MSA
Peever, John - MSc, PhD
Phillips, Michael - BSc, PhD
Plotnikov, Sergey - DSc
Provart, Nicholas - PhD ***(Chair and Graduate Chair)***
Rajavasireddy, Satyaki - BCh, BCh, MC, MC, PhD
Reid, Stephen - BS, PhD
Resulaj, Arbora - BASc, PhD

Ringuette, Maurice - BSc, PhD
Rozeske, Robert Raymond - BA, MA, PhD
Saltzman, Arneet - BSc, PhD
Senatore, Adriano - BSc, MSc, PhD
Sokolowski, Marla - BSc, PhD, CRC
Stewart, Bryan - BSc, MS, DPhil
Takehara, Kaori - BSc, MSc, PhD
Tepass, Ulrich - MSc, PhD, FRSC
Terebiznik, Mauricio - BSc, PhD
Treanor, Bebhinn Lucy - BSc, PhD
Tropepe, Vince - BSc, PhD
Vanlerberghe, Greg - BSc, MSc, PhD
Welch Jr., Ken - BS, MA, PhD
Winklbauer, Rudolf - MSc, PhD
Woodin, Melanie - MSc, PhD
Yoshioka, Keiko - PhD
Zhao, Rongmin - BSc, PhD
Zhen, Mei - PhD
Zovkic, Iva - BA, MA, PhD

Members Emeriti

Coleman, John - BSc, PhD
Hasenkampf, Clare - BSc, MS, PhD
Riggs, Dan - BS, PhD
Varmuza, Susannah - BSc, MSc, PhD
Westwood, Tim - PhD

Associate Members

Ashok, Aarthi - BS, PhD
Fraigne, Jimmy - DPhil
Huang, Kai - PhD
Pressey, Jessica - PhD
Shafer, Maxwell - DChem
Subramaniam, Rajagopal - PhD
Wang, Pauline - DSc

Cell and Systems Biology: Cell and Systems Biology MSc

The MSc program in Cell and Systems Biology provides ideal training for career paths in education, business, and policy where science-based decision-making and the interpretation and transmission of scientific information are becoming increasingly important, particularly in many of the “knowledge-based” economies that are emerging the world over.

The MSc program trains scientists who are well suited to fill this demand. The program’s objective is to provide students with skills in the generation, critical evaluation, assessment, and communication of data so that they are equipped to proceed with further post-graduate degrees, or other career opportunities where such skills are desired.

Master of Science

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Cell and Systems Biology's additional admission requirements stated below.
- An appropriate bachelor's degree with high academic standing from a recognized university, with a B+ (or equivalent) average in the final year of the bachelor's program, and a mid-B overall average in the previous year of study.

Completion Requirements

- Complete 0.5 full-course equivalent (FCE) from the following:
  - CSB1018H *Advanced Microscopy and Imaging*
  - CSB1020H *Topics in Cell and Systems Biology*
  - CSB1025H *Methods in Genomics and Proteomics*
  - CSB1472H *Computational Genomics and Bioinformatics*
  - CSB1482H *Readings in Genome Biology and Bioinformatics*.
- Complete the CSB1010Y *MSc Seminar Series* (minimum 24 seminars per year).
- Complete a thesis based on a research project.
- Give a public presentation of thesis research and defend the thesis at an oral examination.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F)
Time Limit: 3 years full-time

Cell and Systems Biology: Cell and Systems Biology PhD

The PhD program in Cell and Systems Biology trains scientists who will form part of the next generation of independent researchers in cell, molecular, and systems biology. Graduates will be the future high-level teachers, frontier expanders, and decision-makers in these fields of inquiry.

PhD graduates are expected to emerge from the program as independent and autonomous scientists, producing a written thesis that describes original research that stands as a testimony to their ability to generate publishable, stand-alone contributions to the peer-reviewed scientific literature. As part of their training, PhD students acquire skills in the communication of scientific research (including teaching skills), and acquire broad-based knowledge of the theory and practice underpinning their chosen field.

Applicants may enter the PhD program via one of three routes: 1) following completion of an MSc degree; 2) transfer from the University of Toronto MSc program; or 3) direct entry following completion of an honours bachelor's degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Cell and Systems Biology's additional admission requirements stated below.
- Students will be admitted only when they have made arrangements to secure a research supervisor by contacting professors in the department.
- Applicants may be accepted who already hold an MSc degree from a recognized university, with a grade average equivalent to at least a University of Toronto A– during the MSc.

Completion Requirements

- Students must successfully complete:
  - **1.0 full-course equivalent (FCE)** from the following:
    - CSB1018H *Advanced Microscopy and Imaging*
    - CSB1020H *Topics in Cell and Systems Biology*
    - CSB1025H *Methods in Genomics and Proteomics*
    - CSB1472H *Computational Genomics and Bioinformatics*
    - CSB1482H *Readings in Genome Biology and Bioinformatics*.
  - CSB1011Y ***PhD Seminar Series*** (minimum 24 seminars per year).
  - A **PhD proposal**, which involves three components:
    - preparation of a written research proposal
    - presentation to the department and questioning by the public
    - *in-camera* questioning by a PhD proposal examination committee immediately following the public presentation.
  - Their **proposal examination** between 13 and 20 months after the start date of enrolment in their graduate program.
- Students must submit a **thesis** and defend it at a **Doctoral Final Oral Examination** conducted by the School of Graduate Studies.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- Applicants may be accepted first into the University of Toronto MSc program and, conditional upon approval by the thesis supervisory committee, may transfer into the PhD program.

Completion Requirements

Students must:

- Be in good academic standing at the end of Year 1.
- Successfully complete **1.0 full-course equivalent (FCE)** of approved graduate coursework. Those who transfer into the PhD program from the MSc may apply 0.5 graduate FCE towards the PhD course requirements.
- Successfully complete CSB1011Y ***PhD Seminar Series*** (minimum 24 seminars per year).
- Successfully complete a **PhD transfer examination** between 13 and 20 months after the start date of enrolment in their graduate program. The transfer examination involves three components:
  - preparation of a written research proposal
  - presentation to the department and questioning by the public
  - *in-camera* questioning by a PhD proposal examination committee immediately following the public presentation.
- Deliver **two public seminars** in the department based on their thesis research.
- Submit a **thesis** and defend it at a **Doctoral Final Oral Examination** conducted by the School of Graduate Studies.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Cell and Systems Biology's additional admission requirements stated below.
- Applicants will be admitted only when they have made arrangements to secure a research supervisor by contacting professors in the department.
- Exceptional applicants with a BSc degree may be accepted by direct entry into the PhD program, with a grade point average equivalent to a University of Toronto A– or better in the final year of the BSc. Direct-entry PhD candidates should also display evidence of research potential.

Completion Requirements

Students must:

- Be in good academic standing at the end of Year 1.
- Successfully complete **1.0 full-course equivalent (FCE)** of approved graduate coursework.
- Successfully complete CSB1011Y ***PhD Seminar Series*** (minimum 24 seminars per year).
- Complete additional courses if their undergraduate preparation does not include the study of subjects deemed to be necessary for research in the chosen area.

The courses will be chosen in consultation with the supervisory committee.

- Successfully complete a **PhD proposal**, which involves three components:
  - preparation of a written research proposal
  - presentation to the department and questioning by the public
  - *in-camera* questioning by a PhD proposal examination committee immediately following the public presentation.
- Students must successfully complete their **proposal examination** between 13 and 20 months after the start date of enrolment in their graduate program.
- Deliver **two public seminars** in the department based on their thesis research.
- Submit a **thesis** and defend it at a **Doctoral Final Oral Examination** conducted by the School of Graduate Studies.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Cell and Systems Biology: Cell and Systems Biology MSc, PhD Courses

Consult the graduate unit regarding course availability.

Course Code	Course Title
CSB1010Y	MSc Seminar Series
CSB1011Y	PhD Seminar Series
CSB1018H	Advanced Microscopy and Imaging
CSB1020H	Topics in Cell and Systems Biology
CSB1025H	Methods in Genomics and Proteomics
CSB1472H	Computational Genomics and Bioinformatics
CSB1482H	Readings in Genome Biology and Bioinformatics

Chemical Engineering and Applied Chemistry

Chemical Engineering and Applied Chemistry: Introduction

Faculty Affiliation

Applied Science and Engineering

Degree Programs

Chemical Engineering and Applied Chemistry

MASc

- Emphasis:
  - Sustainable Energy

MEng

- Emphases:
  - Advanced Manufacturing;
  - Advanced Soft Materials;
  - Advanced Water Technologies;
  - Biomanufacturing;
  - Data Analytics and Machine Learning;
  - Engineering and Globalization;
  - Entrepreneurship, Leadership, Innovation and Technology in Engineering (ELITE);
  - Environmental Engineering Consulting;
  - Forensic Engineering;
  - Sustainable Energy

PhD

- Emphasis:
  - Sustainable Energy

Combined Degree Programs

- UTSC, Environmental Chemistry (Specialist), Honours BSc / Chemical Engineering and Applied Chemistry, MEng
- UTSC, Environmental Chemistry (Specialist Co-op), Honours BSc / Chemical Engineering and Applied Chemistry, MEng
- UTSC, Environmental Geoscience (Specialist), Honours BSc / Chemical Engineering and Applied Chemistry, MEng
- UTSC, Environmental Geoscience (Specialist Co-op), Honours BSc / Chemical Engineering and Applied Chemistry, MEng
- UTSC, Environmental Physics (Specialist), Honours BSc / Chemical Engineering and Applied Chemistry, MEng
- UTSC, Environmental Physics (Specialist Co-op), Honours BSc / Chemical Engineering and Applied Chemistry, MEng
- UTSC, Global Environmental Change (Specialist), Honours BSc / Chemical Engineering and Applied Chemistry, MEng
- UTSC, Global Environmental Change (Specialist Co-op), Honours BSc / Chemical Engineering and Applied Chemistry, MEng

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Biomedical Engineering** (admissions have been administratively suspended)
  - Chemical Engineering and Applied Chemistry, MASc, PhD
- **Cardiovascular Sciences**
  - Chemical Engineering and Applied Chemistry, MASc, PhD
- **Engineering Education**
  - Chemical Engineering and Applied Chemistry, MASc, PhD
- **Environmental Studies**
  - Chemical Engineering and Applied Chemistry, MASc, MEng, PhD
- **Environment and Health**
  - Chemical Engineering and Applied Chemistry, MASc, MEng, PhD
- **Genome Biology and Bioinformatics**
  - Chemical Engineering and Applied Chemistry, PhD
- **Global Health (U of T Global Scholar)**
  - Chemical Engineering and Applied Chemistry, MASc, MEng, PhD
- **Neuromodulation**
  - Chemical Engineering and Applied Chemistry, MASc, PhD
- **Next-Generation Precision Medicine**
  - Chemical Engineering and Applied Chemistry, PhD

Overview

The Department of Chemical Engineering and Applied Chemistry offers graduate research in pure science, engineering fundamentals, and engineering applications. The department attracts a dynamic professorial staff with outstanding international reputations. Many graduate students work closely with industrial partners during their studies. Research is funded by the government and industry, often by means of a consortium of companies. The experience of dealing with real-world problems prepares graduates for successful professional careers.

Research and teaching are the foundations of the department. Research is clustered into eight major categories:

- Biomolecular and Biomedical Engineering
- Bioprocess Engineering
- Chemical and Materials Process Engineering
- Engineering Informatics
- Environmental Science and Engineering
- Pulp and Paper
- Surface and Interface Engineering
- Sustainable Energy

Contact and Address

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200 College Street, Toronto, Ontario M5S 3E5 Canada

Chemical Engineering and Applied Chemistry: Graduate Faculty

Full Members

Acosta, Edgar Joel - BS, MS, PhD
Allen, Grant - BASc, MASc, PhD
Amon, Cristina - BASc, MSc, ScD
Aspuru-Guzik, Alan - PhD
Audet, Julie - MASc, PhD
Azimi, Gisele - BASc, MASc, PhD
Bender, Timothy - PhD
Chan, Arthur - BS, MSc, PhD
Chan, Warren - BSc, PhD
Cheng, Yu-Ling - SB, PhD
Chin, Cathy Ya Huei - BSc, MSc, PhD
Cluett, William - BSc, PhD
Coyle, Tom - BS, BA, ScD
Diamond, Miriam - MSc, MSc, PhD
Edwards, Aled - BSc, PhD
Edwards, Elizabeth - BEng, PhD
Evans, Greg - PhD
Farnood, Ramin - BASc, MASc, PhD ***(Chair and Graduate Chair)***
Goh, M. Cynthia - PhD
Gu, Frank - BSc, PhD
Hattrick-Simpers, Jason - BS, PhD
Jia, Charles - BEng, MEng, PhD ***(Associate Chair, Continuing Professional Development)***
Kirk, Donald - BASc, MASc, PhD
Kortschot, Mark - BASc, MASc, PhD
Kumacheva, Eugenia - MSc, PhD
Lawryshyn, Yuri - DipIng, BASc, MASc, MBA, PhD
Lawson, Christopher - PhD
Mahadevan, Radhakrishnan - BTech, PhD
Master, Emma - BSc, PhD
McGuigan, Alison - MEng, PhD
Moore, Emily - BASc, DPhil
Moosavi, Mohamad - PhD
Naguib, Hani - BSc, ME, PhD, PEng
Newman, Roger Charles - BA, DSc, PhD
Papangelakis, Vladimiros - MEng, PhD
Radisic, Milica - BEng, PhD
Ramchandran, Arun - PhD ***(Associate Chair and Graduate Coordinator)***
Sain, Mohini - PhD
Santerre, Paul - BSc, MSc, PhD
Saville, Bradley - BSc, PhD
Seferos, Dwight - BCh, DChem
Sefton, Michael - BASc, ScD
Sherwood Lollar, Barbara - PhD
Shoichet, Molly - PhD
Sinton, David - BASc, MEng, PhD
Tabe, Shahram - BASc, MASc, PhD
Thorpe, Steven - BASc, MASc, PhD
Walsh, Aron - DChem
Weckman, Nicole - BSc, MEng, PhD
Werber, Jay - MPH, PhD
Yan, Ning - BSc, PhD, PEng
Yip, Christopher - BSc, PhD

Members Emeriti

Diosady, Levente - BASc, MASc, PhD
Tran, Honghi - PhD

Associate Members

Chan, Ariel - BSc, MSc, PhD
Farmer, Jennifer - BSc, PhD
Galatro, Daniela - MSc
Gavazza, Savia - BSc, PhD
Gong, Sunling - BASc, MASc, PhD
Jones, Andrew Kevin - BSE, MASc, PhD
Lee, Alex King Yin - PhD
Liss, Steven - BSc, MSc, PhD
Rizvi, Syed - BS, MEng, MS, PhD
Rottmann, Cindy - BSc, BE, AM, DPhil
Savchenko, Alexei - MS, PhD
Tran, Helen - PhD

Chemical Engineering and Applied Chemistry: Chemical Engineering and Applied Chemistry MASc

The MASc program is ideal for students who aspire to a rewarding career in research, whether in academia or industry. It is a stepping stone to a doctoral (PhD) degree.

Master of Applied Science

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Chemical Engineering and

Applied Chemistry's additional admission requirements stated below.
- A four-year degree (or equivalent) in engineering or the physical/chemical/biological sciences with a B+ average (or equivalent) in each of the last two years of full-time study.

Completion Requirements

- Each student should discuss possible research projects with several members of the department before selecting a research area and a supervisor. Students must complete a **thesis** on a research topic.
- **Coursework.** Students must successfully complete a total of **1.5 full-course equivalents [FCEs]** (three graduate half courses) as follows:
  - One of these courses must be CHE1102H *Research Methods and Project Execution for Graduate Studies in Chemical Engineering*, typically completed in Year 1.
  - At least one course must be selected in an area outside the student's area of research.
  - Only one 500-level course may be taken for credit towards the degree program.
- All Year 1 and Year 2 students must complete CHE3001H *Leading Edge Seminar Series in Chemical Engineering and Applied Chemistry* in both the Fall and Winter sessions.
- Students must complete CHE3012Y *MASc Research* in Year 1 and in subsequent years if recommended by their advisory committee.
- Students must also complete CHE2222H *Safety Workshop* and JDE1000H *Ethics in Research*.
- The program requires a minimum full-time **residence** of two sessions (eight months). This means students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.
- Students have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Chemical Engineering and Applied Chemistry MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Chemical Engineering and Applied Chemistry: Chemical Engineering and Applied Chemistry MEng

The MEng program is designed for engineers who wish to enhance their career opportunities in as little as one year of full-time study. Students undergo advanced professional training that is respected by employers and differentiates them in a crowded marketplace. The MEng program differs from the MASc and PhD programs in that it is oriented to learning through prescribed courses rather than through research.

The MEng program can be taken on a full-time, extended full-time (EFT), or part-time basis. The part-time option is intended primarily for engineers in full-time professional practice. Students may begin the EFT program at different times.

Full-Time and Part-Time Options

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Chemical Engineering and Applied Chemistry's additional admission requirements stated below.
- A Bachelor of Engineering (BEng) or Bachelor of Applied Science (BASc) degree in engineering or physical/chemical/biological sciences with at least a mid-B (or equivalent) in each of the last two years of full-time study.

Completion Requirements

- The MEng program normally requires completion of:
  - a total of 5.0 full-course equivalents (FCEs) **or**
  - 3.5 FCEs plus a 1.5-FCE project supervised by a faculty member. At the discretion of the supervisor, a second reviewer and/or oral defence may be requested for students who plan to enter the doctoral program.
- Full-time students normally complete the requirements in three sessions (one year).
- Part-time students normally complete the requirements in nine sessions (three years). The limit is four half courses per year and two half courses per session.
- Students have the option of completing an emphasis in Advanced Manufacturing; Advanced Soft Materials; Advanced Water Technologies; Biomanufacturing; Data Analytics and Machine Learning; Engineering and Globalization; Entrepreneurship, Leadership, Innovation and Technology in Engineering (ELITE); Environmental Engineering Consulting; Forensic Engineering; or Sustainable Energy as part of their degree program. Please see details in the Chemical Engineering and Applied Chemistry Emphases section.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 9 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Extended Full-Time Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Chemical Engineering and Applied Chemistry's additional admission requirements stated below.

- A Bachelor of Engineering (BEng) or Bachelor of Applied Science (BASc) degree in engineering or physical/chemical/biological sciences with at least a mid-B (or equivalent) in each of the last two years of full-time study.

Completion Requirements

- The MEng program normally requires completion of:
  - a total of 5.0 full-course equivalents (FCEs) **or**
  - 3.5 FCEs plus a 1.5-FCE project supervised by a faculty member. At the discretion of the supervisor, a second reviewer and/or oral defence may be requested for students who plan to enter the doctoral program.
- Students are expected to complete the requirements in six sessions (two years). The limit is six half courses per year and three half courses per session.
- Students have the option of completing an emphasis in Advanced Manufacturing; Advanced Soft Materials; Advanced Water Technologies; Biomanufacturing; Data Analytics and Machine Learning; Engineering and Globalization; Entrepreneurship, Leadership, Innovation and Technology in Engineering (ELITE); Environmental Engineering Consulting; Forensic Engineering; or Sustainable Energy as part of their degree program. Please see details in the Chemical Engineering and Applied Chemistry Emphases section.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Chemical Engineering and Applied Chemistry: Chemical Engineering and Applied Chemistry PhD

The PhD program is designed for students who wish to become an expert in a specific research area and is a stepping stone to a career in academia. Students work alongside world-renowned researchers while gaining profound depth and experience in their field of study.

Applicants may enter the program via one of three routes: 1) following completion of an MASc degree; 2) transfer from the University of Toronto MASc program after completing one year; or 3) direct entry following completion of a bachelor's degree, in exceptional cases. The program can also be taken on a flexible-time basis.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Chemical Engineering and Applied Chemistry's additional admission requirements stated below.
- B+ (or equivalent) overall average in a research master's degree in engineering or the physical/chemical/biological sciences.
- Additionally, applicants should have exceptional all-around scientific and intellectual ability as evidenced from theoretical or experimental research, academic standing, initiative, and publication record.

Completion Requirements

- **Coursework.** Students must successfully complete at least **2.0 full-course equivalents (FCEs)** (four graduate half courses).
  - One course must be CHE1102H *Research Methods and Project Execution for Graduate Studies in Chemical Engineering*, taken once during the program, typically in Year 1.
  - Courses must be selected from the calendar and approved by the student's supervisor and the Graduate Coordinator. At least one of these courses must be taken in a secondary area of study. It is recommended that one of these courses should be selected from Category A: fundamental courses.
  - Normally, PhD students are not allowed to take a 500-level course for credit towards the degree program.
- Within 13 months of starting the PhD program, students must pass a **qualifying examination**.
- All Year 1, Year 2, Year 3, and Year 4 students must complete CHE3001H *Leading Edge Seminar Series in Chemical Engineering and Applied Chemistry* in both the Fall and Winter sessions.
- Students must complete CHE3010Y *PhD Research* at least once per year.
- If not already completed, students must take CHE2222H *Safety Workshop* and JDE1000H *Ethics in Research*.
- **Thesis** on a research topic.
- Students normally remain in **residence** (full-time, on campus) until the departmental recommendation for the **Doctoral Final Oral Examination** is made, unless special permission to do so has otherwise been granted by the departmental Graduate Studies Committee.
- Students have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Chemical Engineering and Applied Chemistry MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 4 years full-time
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- B+ (or equivalent) in each of the last two years of full-time study in the undergraduate program.
- Applicants may enter the PhD program by transferring from the University of Toronto MASc program after

completing one year; such students must successfully complete a bypass examination.
- International applicants with a master's degree from outside Canada or the United States may be asked to register in the MASc program and follow the transfer route of entry.

Completion Requirements

- **Coursework.** Students must successfully complete at least **3.0 full-course equivalents (FCEs)** (six graduate half courses) and do not have to take a separate PhD qualifying examination.
  - One course must be CHE1102H *Research Methods and Project Execution for Graduate Studies in Chemical Engineering*, taken once during the program, typically in Year 1.
  - Courses must be selected from the calendar and approved by the student's supervisor and the Graduate Coordinator. At least one of these courses must be taken in a secondary area of study. It is recommended that one of these courses should be selected from Category A: fundamental courses.
  - Normally, PhD students are not allowed to take a 500-level course for credit towards the degree program.
- All Year 1, Year 2, Year 3, and Year 4 students must complete CHE3001H *Leading Edge Seminar Series in Chemical Engineering and Applied Chemistry* in both the Fall and Winter sessions.
- Students must complete CHE3010Y *PhD Research* at least once per year.
- If not already completed, students must take CHE2222H *Safety Workshop* and JDE1000H *Ethics in Research*.
- **Thesis** on a research topic.
- Students normally remain in **residence** (full-time, on campus) until the departmental recommendation for the **Doctoral Final Oral Examination** is made, unless special permission to do so has otherwise been granted by the departmental Graduate Studies Committee.
- Students have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Chemical Engineering and Applied Chemistry MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 5 years full-time
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Chemical Engineering and Applied Chemistry's additional admission requirements stated below.
- Minimum A– average in each of the final two years of study in the undergraduate program in engineering or natural sciences (e.g., biology, chemistry, physics) and participation in a research project (either through an undergraduate thesis or through research conducted in a lab).

Completion Requirements

- **Coursework.** Students must successfully complete at least **3.0 full-course equivalents (FCEs)** (six graduate half courses).
  - One course must be CHE1102H *Research Methods and Project Execution for Graduate Studies in Chemical Engineering*, taken once during the program, typically in Year 1.
  - Courses must be selected from the calendar and approved by the student's supervisor and the Graduate Coordinator. At least one of these courses must be taken in a secondary area of study. It is recommended that one of these courses should be selected from Category A: fundamental courses.
  - Normally, PhD students are not allowed to take a 500-level course for credit towards the degree program.
- Within 13 months of starting the PhD program, students must pass a **qualifying examination**.
- All Year 1, Year 2, Year 3, and Year 4 students must complete CHE3001H *Leading Edge Seminar Series in Chemical Engineering and Applied Chemistry* in both the Fall and Winter sessions.
- Students must complete CHE3010Y *PhD Research* at least once per year.
- If not already completed, students must take CHE2222H *Safety Workshop* and JDE1000H *Ethics in Research*.
- **Thesis** on a research topic.
- Students normally remain in **residence** (full-time, on campus) until the departmental recommendation for the **Doctoral Final Oral Examination** is made, unless special permission to do so has otherwise been granted by the departmental Graduate Studies Committee.
- Students have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Chemical Engineering and Applied Chemistry MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 5 years full-time
Time Limit: 7 years full-time

PhD Program (Flexible-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Chemical Engineering and Applied Chemistry's additional admission requirements stated below.

- B+ (or equivalent) in each of the last two years of full-time study in the undergraduate program, and successful completion of a research master's degree with an overall average of at least B+ (or equivalent).
- Applicants may enter the PhD following completion of an MASc program with a minimum B+ average and exceptional all-around scientific and intellectual ability as evidenced from theoretical or experimental research, academic standing, initiative, and publication record.
- Applicants to the flexible-time PhD option are accepted under the same admission requirements as applicants to the full-time PhD option. However, applicants to the flexible-time PhD option must also demonstrate that they are actively engaged in professional activities related to their proposed program of study.

Completion Requirements

- Students in the flexible-time option will be subject to the same requirements as students in the full-time option.
- **Coursework.** Students must successfully complete at least **2.0 full-course equivalents (FCEs)** (four graduate half courses).
  - One course must be CHE1102H *Research Methods and Project Execution for Graduate Studies in Chemical Engineering*, taken once during the program, typically in Year 1.
  - Courses must be selected from the calendar and approved by the student's supervisor and the Graduate Coordinator. At least one of these courses must be taken in a secondary area of study. It is recommended that one of these courses should be selected from Category A: fundamental courses.
  - Normally, PhD students are not allowed to take a 500-level course for credit towards the degree program.
- Within 16 months of starting the PhD program, students must pass a **qualifying examination**.
- All Year 1, Year 2, Year 3, and Year 4 students must complete CHE3001H *Leading Edge Seminar Series in Chemical Engineering and Applied Chemistry* in both the Fall and Winter sessions.
- Students must complete CHE3010Y *PhD Research* at least once per year.
- If not already completed, students must take CHE2222H *Safety Workshop* and JDE1000H *Ethics in Research*.
- **Thesis** on a research topic.
- Students normally remain in **residence** (full-time, on campus) until the departmental recommendation for the **Doctoral Final Oral Examination** is made, unless special permission to do so has otherwise been granted by the departmental Graduate Studies Committee.
- Students in the PhD program have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Chemical Engineering and Applied Chemistry MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 6 years full-time
Time Limit: 8 years full-time

Chemical Engineering and Applied Chemistry: Emphases

Advanced Manufacturing

Participating Programs:

- Aerospace Science and Engineering MEng
- Chemical Engineering and Applied Chemistry MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete:

- **Four half courses (2.0 full-course equivalents [FCEs])**, including at least one core course.
- Elective courses may include other core courses, and courses from either of two streams: Manufacturing Engineering and Manufacturing Management.

Core Courses

AER501H1 *Computational Structural Mechanics and Design Optimization*,
AER1403H *Advanced Aerospace Structures*,
APS1028H *Operations and Production Management for Manufacturing and Services*,
CHE1123H *Liquid Biofuels*,
MIE519H1 *Advanced Manufacturing Technologies*,
MIE1740H *Smart Materials and Structures*.

Elective Courses — Manufacturing Engineering

AER1415H,
CHE1134H, CHE1475H,
MIE506H1, MIE540H1, MIE1706H, MIE1709H, MIE1718H, MIE1743H,
MSE1013H, MSE1015H, MSE1028H, MSE1031H, MSE1043H, MSE1058H, MSE1061H,
ROB501H1, ROB521H1.

Elective Courses — Manufacturing Management

APS1012H, APS1013H, APS1017H, APS1020H, APS1023H, APS1088H, APS1420H,
CHE561H1, CHE1434H,
MIE523H1, MIE1022H, MIE1505H, MIE1514H, MIE1715H, MIE1721H, MIE1727H,
TEP1011H, TEP1026H, TEP1501H.

Advanced Soft Materials

Participating Programs:

- Chemical Engineering and Applied Chemistry MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete any **four half courses (2.0 full-course equivalents [FCEs])** from the following list:
CHE562H1, CHE1310H, CHE1333H, CHE1335H, CHE1475H, JTC1134H, JTC1135H,
MIE1705H, MIE1706H, MIE1707H, MIE1740H,
MSE1043H.

Students may double-count one course at most towards any CHE emphasis, or towards any other emphasis in the Faculty.

Advanced Water Technologies

Participating Programs:

- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete a total of **2.0 full-course equivalents (FCEs)** (four half courses).

Core Courses

Students must select at least one of the following (0.5 FCE):

- CHE1150H *Industrial Water Technology*
- CIV1308H *Physical and Chemical Treatment Processes*
- CIV1309H *Biological Treatment Processes*
- CIV1311H *Advanced and Sustainable Drinking Water Treatment*

Students may select an additional course (0.5 FCE) from the list above, **or** they must select one (0.5 FCE) of the following:

- CHE565H1 *Aqueous Process Engineering*
- CIV541H1 *Environmental Biotechnology*
- CIV550H1 *Water Resources Engineering*
- CIV1303H *Water Resources Systems Modeling*
- CIV1319H *Chemistry and Analysis of Water and Wastes*
- CIV1330H *Water, Sanitation, Hygiene, and Global Health*
- CIV1398H *New Topics in Civil and Mineral Engineering*
- CME500H1 *Fundamentals of Acid Rock Drainage*
- CME549H1 *Groundwater Flow and Contamination*.

Specialization Courses

Students must select the remaining balance of courses (1.0 FCE) from the following, or from any of the core courses listed above:

- CHE1213H *Corrosion*
- CHE1430H *Hydrometallurgy Theory and Practice*
- JCC1313H *Environmental Microbiology*
- JNC2503H *Environmental Pathways*.

Enrolment and Completion

Students should contact Alison Morley (meng.civmin@utoronto.ca) to declare their interest, so that they can be notified of water engineering-related events and extracurricular activities.

To receive acknowledgment of the emphasis on their transcript, it is the student's responsibility to declare completion of the emphasis to their home department's graduate program administrator at the same time that they are requesting convocation. The student may also reach out to meng.civmin@utoronto.ca to confirm the completion of the emphasis.

Biomanufacturing

Participating Programs:

- Chemical Engineering and Applied Chemistry MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete any **four half courses (2.0 full-course equivalents [FCEs])** from the following list:
CHE1123H, CHE1125H, CHE1134H, CHE1135H, CHE1334H, CHE1450H, CHE1471H,
JCC1313H,
JTC1331H,
BME1459H, BME1480H.

Students may double-count one course at most towards any CHE emphasis, or towards any other emphasis in the Faculty.

Data Analytics and Machine Learning

Participating Programs:

- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Electrical and Computer Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

To be admitted to the emphasis in Data Analytics and Machine Learning, MEng students must first successfully complete a **prerequisite course APS1070H (0.5 full-course equivalent [FCE])**.

Subsequently, to earn the emphasis, students must successfully complete **four additional half courses (2.0 FCEs)** from the list of core courses or elective courses. These must include at least one core course; the remaining courses must be selected from the list of elective courses.

Students must have completed the prerequisite course APS1070H before taking any of the core courses.

Prerequisite Course

APS1070H *Foundations of Data Analytics and Machine Learning*.

Core Courses

CHE1147H *Data Mining in Engineering*,
ECE1513H *Introduction to Machine Learning*,
MIE1624H *Introduction to Data Science and Analytics*,
MIE1626H *Data Science Methods and Statistical Learning*,
MSE1065H *Application of Artificial Intelligence in Materials Design*.

Elective Courses

APS502H1, APS1005H, APS1017H, APS1022H, APS1050H, APS1051H, APS1052H, APS1053H, APS1080H,
BME1570H,
CEM1002H,
CHE507H1, CHE1108H, CHE1148H, CHE1434H,
CIV1504H, CIV1506H, CIV1507H, CIV1532H, CIV1538H, CIV1599H,
ECE537H1, ECE1504H, ECE1505H, ECE1657H, ECE1779H, ECE1786H,
MIE562H1, MIE1077H, MIE1413H, MIE1501H, MIE1512H, MIE1513H, MIE1517H, MIE1520H, MIE1620H, MIE1621H, MIE1622H, MIE1623H, MIE1625H, MIE1628H, MIE1653H, MIE1666H, MIE1721H, MIE1727H, MIE1769H,
MSE1063H.

Engineering and Globalization

Participating Programs:

- Aerospace Science and Engineering MEng
- Biomedical Engineering MEng
- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Electrical and Computer Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete **four half courses (2.0 full-course equivalents [FCEs])** from the following lists, with at least two half courses (or one full course) taken from Group A.

Group A

APS510H1, APS530H1, APS1420H, JCR1000Y (full-year course).

Group B

APS1015H, APS1020H, APS1024H, CHL5700H, CIV1399H.
Note: Students who choose to pursue an MEng project in their home department that aligns with the Centre for Global Engineering (CGEN)'s disciplinary focus, as deemed by the CGEN Director, may count the project as one required Group B course.

Students who complete the requirements of the emphasis in Engineering and Globalization and wish to obtain a notation on their transcript should contact the Faculty Graduate Studies office.

Entrepreneurship, Leadership, Innovation and Technology in Engineering

Participating Programs:

- Aerospace Science and Engineering MEng
- Biomedical Engineering MEng
- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Electrical and Computer Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete **any four of the following courses (2.0 full-course equivalents [FCEs])**:

Leadership

TEP1010H, TEP1011H, TEP1026H, TEP1027H, TEP1029H, TEP1030H, TEP1501H, TEP1502H, TEP1601H.

Entrepreneurship and Innovation

APS511H1, APS1012H, APS1013H, APS1015H, APS1023H, APS1033H, APS1035H, APS1036H, APS1041H, APS1061H, APS1088H.

Finance and Management

AER1601H, APS500H1, APS502H1, APS1001H, APS1004H, APS1009H, APS1016H, APS1017H, APS1020H, APS1022H, APS1028H, APS1032H, APS1043H, APS1049H, APS1050H, APS1051H, APS1052H.

Engineering and Society

APS510H1, APS1018H, APS1024H, APS1025H, APS1031H, APS1034H, APS1090H, APS1101H, APS1420H.

Environmental Engineering Consulting

Participating Programs:

- Chemical Engineering and Applied Chemistry MEng

MEng students must successfully complete **four half courses (2.0 full-course equivalents [FCEs])**, including at least one core course (0.5 FCE) from the following list.

Core Courses

CHE1151H *Engineering Systems Sustainability*,
CHE1431H *Environmental Auditing*,
CHE1432H *Technical Aspects of Environmental Regulations*,
CIV1319H *Chemistry and Analysis of Water and Waste*,
CME549H1 *Groundwater Flow and Contamination*.

The remaining coursework may be taken from the list of elective courses.

Elective Courses

CHE561H1, CHE1150H, CHE1433H, CIV536H1, CIV541H1, CIV1308H, CIV1321H, CME500H1, JCC1313H, JNC2503H.

Forensic Engineering

Participating Programs:

- Biomedical Engineering MEng
- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete **four courses (one core course and three elective courses; 2.0 full-course equivalents [FCEs])**.

Core Course

MSE1031H *Forensic Engineering*.

Elective Courses

AER1604H,
APS1034H, APS1039H, APS1040H, APS1101H,
BME1480H, BME1800H, BME1801H, BME1802H,
CHE561H1, CHE568H1, CHE1213H, CHE1431H, CHE1432H, CHE1434H, CHE1436H,
CIV510H1, CIV518H1, CIV1163H, CIV1171H, CIV1174H, CIV1190H, CIV1201H, CIV1279H, CIV1282H, CIV1422H, CIV1429H,
JMB1050H,
JNC2503H,
MIE507H1, MIE533H1, MIE566H1, MIE1301H, MIE1303H, MIE1411H, MIE1414H, MIE1514H, MIE1616H, MIE1708H, MIE1714H, MIE1721H, MIE1727H, MIE1804H,
MSE1015H, MSE1016H, MSE1022H, MSE1032H, MSE1067H.

Sustainable Energy

Participating Programs:

- Aerospace Science and Engineering MASc
- Aerospace Science and Engineering MEng
- Aerospace Science and Engineering PhD
- Chemical Engineering and Applied Chemistry MASc
- Chemical Engineering and Applied Chemistry MEng
- Chemical Engineering and Applied Chemistry PhD
- Civil Engineering MASc
- Civil Engineering MEng
- Civil Engineering PhD
- Electrical and Computer Engineering MASc
- Electrical and Computer Engineering MEng
- Electrical and Computer Engineering PhD
- Mechanical and Industrial Engineering MASc
- Mechanical and Industrial Engineering MEng
- Mechanical and Industrial Engineering PhD
- Materials Science and Engineering MASc
- Materials Science and Engineering MEng
- Materials Science and Engineering PhD

MASc and PhD students must successfully complete:

- At least **three half courses (1.5 full-course equivalents [FCEs])** from either of the following lists below.
- A thesis towards their degree on a topic related to sustainable energy. Topics must be approved by the steering committee of the Institute of Sustainable Energy. Contact: emphasis@cpe.utoronto.ca.

MEng students must successfully complete:

- **Four half courses (2.0 FCEs)** from either of the following lists below, including at least one core course (0.5 FCE).

Core Courses

APS1032H *Introduction to Energy Project Management*,
MIE515H1 *Alternative Energy Systems*,
MIE1120H *Current Energy Infrastructure and Resources*.

Elective Courses

AER507H1, AER1304H, AER1315H, AER1415H,
CHE568H1, CHE1053H, CHE1118H, CHE1123H, CHE1142H, CHE1143H,
CIV575H1, CIV576H1, CIV577H1, CIV1303H, CIV1307H,
ECE1030H, ECE1055H, ECE1057H, ECE1059H, ECE1085H, ECE1086H, ECE1092H, ECE1094H, ECE1476H,
MIE516H1, MIE517H1, MIE1128H, MIE1129H, MIE1130H, MIE1132H, MIE1240H, MIE1241H, MIE1715H,
MSE1023H, MSE1028H, MSE1058H.

Contact

All students are asked to register with Climate Positive Energy (CPE) at emphasis@cpe.utoronto.ca, at the beginning of their studies, to receive information about energy-related activities and opportunities on campus. CPE also administers a number of awards and scholarships for which students may be eligible.

Chemical Engineering and Applied Chemistry: Chemical Engineering and Applied Chemistry MASc, MEng, PhD Courses

An updated course list and schedule is available on the departmental website at the beginning of each session listing the time and room location for each course. Not all courses are given every year.

All students wishing to undertake research and teaching in the Department of Chemical Engineering and Applied Chemistry must successfully complete an intensive occupational health and safety training workshop, CHE2222H *Safety Workshop*, which normally takes place during the week immediately preceding the commencement of graduate courses in the Fall. In each subsequent year of registration, students must take the Workplace Hazardous Materials Information System refresher workshop.

MASc students must complete CHE3012Y *MASc Research* in Year 1, and in subsequent years if recommended by their advisory committee.

PhD students must complete CHE3010Y *PhD Research* every year.

Students registered in a graduate degree program involving research are required to participate in the non-credit seminar course JDE1000H *Ethics in Research* during their first or second session of registration.

Category A: Fundamental Courses

Course Code	Course Title
CHE1100H	Fundamentals of Chemical Engineering
CHE1107H	Applied Mathematics
CHE1141H	Advanced Chemical Reaction Engineering
CHE1142H	Applied Chemical Thermodynamics
CHE1143H	Transport Phenomena
CHE1310H	Chemical Properties of Polymers
JTC1134H	Applied Surface and Interface Science
JTC1135H	Applied Surface Chemistry

Category B: Specialized Courses

Course Code	Course Title
APS502H1	Financial Engineering
APS510H1	Innovative Technologies and Organizations in Global Energy Systems
APS530H1	Appropriate Technology and Design for Global Development
APS1001H	Project Management
APS1004H	Human Resource Management: An Engineering Perspective
APS1005H	Operations Research for Engineering Management
APS1009H	Natural Resources Management
APS1012H	Managing Business Innovation and Transformational Change
APS1013H	Applying Innovation in Engineering and Business Operations
APS1015H	Social Entrepreneurship
APS1016H	Financial Management for Engineers
APS1017H	Supply Chain Management and Logistics
APS1018H	The Engineer in Society — Ethics, History, and Philosophy
APS1020H	International Business for Engineers
APS1022H	Financial Engineering II
APS1023H	New Production Innovation
APS1024H	Infrastructure Resilience Planning
APS1025H	Infrastructure Protection
APS1028H	Operations and Production Management for Manufacturing and Services
APS1031H	Infrastructure Planning
APS1032H	Introduction to Energy Project Management
APS1033H	Business Innovation Leading to the Future, Based on Imagineering
APS1034H	Making Sense of Accidents
APS1035H	Taking a New Venture to Market
APS1036H	Formative Experiential Entrepreneurial Learning (FEEL)
APS1043H	Writing Your Own Patent Application
APS1070H	Foundations of Data Analytics and Machine Learning
APS1088H	Entrepreneurship and Business for Engineers
APS1201H	Topics in Engineering and Public Policy 500-Level (undergraduate/graduate) Courses
APS1420H	Technology, Engineering, and Global Development
CHE507H1	Process Modelling and Simulation
CHE561H1	Risk Based Safety Management
CHE564H1	Pulp and Paper Processes
CHE565H1	Aqueous Process Engineering
CHE568H1	Nuclear Engineering
CHE1053H	Electrochemistry
CHE1108H	Numerical Methods in Chemical Engineering
CHE1123H	Liquid Biofuels
CHE1125H	Modelling and Optimization of Chemical and Biomedical Networks
CHE1134H	Advances in Bioengineering

Course Code	Course Title
CHE1135H	Role of Climate Change Policies and Regulations in Shaping Chemical and Biochemical Sector
CHE1147H	Data Mining in Engineering
CHE1148H	Process Data Analytics
CHE1150H	Industrial Water Technology
CHE1151H	Engineering Systems Sustainability
CHE1152H	Membrane Engineering
CHE1213H	Corrosion
CHE1333H	Biomaterials Engineering for Nanomedicine
CHE1334H	Organ-on-a-Chip Engineering
CHE1430H	Hydrometallurgy, Theory, and Practice
CHE1431H	Environmental Auditing
CHE1432H	Technical Aspects of Environmental Regulations
CHE1433H	Air Dispersion Modelling
CHE1434H	Six Sigma for Chemical Processes
CHE1435H	Fundamentals of Aerosol Physics and Chemistry
CHE1450H	Bioprocess Engineering
CHE1471H	Modelling in Biological and Chemical Systems
CHE1475H	Biocomposite Materials
CHE3010Y	PhD Research
CHE3012Y	MASc Research
JCB1349H	Molecular Assemblies: Structure/Function/Properties
JCC1313H	Environmental Microbiology
JCR1000Y	An Interdisciplinary Approach to Addressing Global Challenges
JNC2503H	Environmental Pathways
JTC1331H	Biomaterials Science
TEP1010H	Cognitive and Psychological Foundations of Effective Leadership
TEP1011H	Authentic Leadership and Teaming
TEP1026H	Positive Psychology for Engineers
TEP1027H	Engineering Presentations
TEP1029H	The Science of Emotional Intelligence and its Application to Leadership
TEP1030H	Engineering Careers — Theories and Strategies to Manage Your Career for the Future
TEP1501H	Leadership and Leading in Groups and Organizations
TEP1502H	Leadership in Product Design
TEP5500H	Research Methods and Project Execution for Graduate Student Success

MASc and PhD Seminar Courses

Course Code	Course Title
CHE1102H	Research Methods and Project Execution for Graduate Studies in Chemical Engineering
CHE3001H	Leading Edge Seminar Series in Chemical Engineering and Applied Chemistry
JDE1000H	Ethics in Research

In addition to the above courses, students may elect to take courses in other engineering or science departments where such courses are deemed relevant to the area of study. These courses require prior approval from the Graduate Coordinator.

Chemistry

Chemistry: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Chemistry

MSc

- Fields:
  - Analytical Chemistry;
  - Environmental Chemistry;
  - Inorganic Chemistry;
  - Interdisciplinary;
  - Organic and Biological Chemistry;
  - Physical Chemistry and Chemical Physics;
  - Polymers and Materials Chemistry

PhD

- Fields:
  - Analytical Chemistry;
  - Environmental Chemistry;
  - Inorganic Chemistry;
  - Interdisciplinary;
  - Organic and Biological Chemistry;
  - Physical Chemistry and Chemical Physics;
  - Polymers and Materials Chemistry

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Biomedical Engineering** (admissions have been administratively suspended)
  - Chemistry, MSc, PhD
- **Environmental Studies**
  - Chemistry, MSc, PhD
- **Next-Generation Precision Medicine**
  - Chemistry, PhD

Overview

Faculty members of the Department of Chemistry are world leaders and research offerings are made in a rich array of ever evolving sub-disciplines (physical, organic, biological, materials, inorganic, theoretical, analytical, environmental, and nanochemistry).

Research is conducted using state-of-the-art instrumentation housed in laboratories that have been newly built or recently renovated.

Modern facilities are available for research in the Department of Chemistry. The areas of interest cover a wide variety of topics in analytical, biological, environmental, inorganic, organic, materials, polymers, physical, and theoretical chemistry and their related interdisciplinary areas.

Contact and Address

Web: www.chemistry.utoronto.ca
Email: chem.gradcoord@utoronto.ca
Telephone: (416) 978-3605
Fax: (416) 978-1631

Department of Chemistry, University of Toronto
Room 151, Lash Miller Building
80 St. George Street
Toronto, Ontario M5S 3H6 Canada

Chemistry: Graduate Faculty

Full Members

Abbatt, Jonathan - BSc, PhD
Aspuru-Guzik, Alan - PhD
Batey, Robert Alexander - BA, PhD
Beharry, Andrew - BSc, PhD
Bender, Timothy - PhD
Brumer, Paul - BSc, PhD
Chan, Arthur - BS, MSc, PhD
Chan, Warren - BSc, PhD
Chin, Jik - MS, PhD
Cui, Haissi - PhD
Dhirani, Al-Amin - MSc, PhD
Fekl, Ulrich - MSc, PhD
Goh, M. Cynthia - PhD
Gradinaru, Claudiu - PhD
Gunning, Patrick - BS, PhD
Howe, Jane - PhD
Izmaylov, Artur - PhD
Jockusch, Rebecca - BA, PhD
Kanelis, Voula - PhD
Kay, Lewis - PhD
Kerman, Kagan - BScPhm, MSc, ScD
Kluger, Ronald - AB, AM, PhD
Korzynski, Maciej - BSE, MSc, PhD
Kraatz, Heinz-Bernhard - BA, MC, PhD
Kumacheva, Eugenia - MSc, PhD
Lautens, Mark - BSc, PhD ***(Chair and Graduate Chair)***
Mabury, Scott - BS, PhD
McMillen, David - BSc, MS, PhD
Miller, R.J. Dwayne - BSc, PhD
Morris, Robert - BSc, PhD, Fellow NATO
Murphy, Jennifer - BCh, DChem
Nitz, Mark - BSc, PhD
Ogata, Alana - BS, PhD
Ozin, Geoffrey - BSc, PhD
Prosser, Scott - BSc, MSc, DPhil
Rousseaux, Sophie - PhD
Schofield, Jeremy - PhD

Seferos, Dwight - BCh, DChem
Segal, Dvira - BSc, DSc
Sherwood Lollar, Barbara - PhD
Shin, Jumi - AB, DPhil
Shoichet, Molly - PhD
Simpson, Andre - BSc, PhD
Simpson, Myrna - BS, DPhil
Song, Datong - BSc, PhD
Stephan, Douglas - BSc, PhD
Taylor, Mark - BSc, DSc
Thompson, Michael - BSc, PhD, DSc, FRSC
Tran, Helen - PhD
von Lilienfeld Toal, Anatole - PhD
Walker, Gilbert - BCh, PhD
Wania, Frank - MPH, PhD
Wheeler, Aaron - BS, PhD
Wilson, Mark - PhD
Winnik, Mitchell - BA, PhD
Woolley, Drew - PhD
Yudin, Andrei - BS, PhD
Zhang, Xiaoan - MS, PhD

Members Emeriti

Donaldson, D. James - PhD
Georges, Michael - BS, PhD
Jones, Bryan - BSc, PhD, DPhil
Kapral, Raymond - BSc, PhD
Krull, Ulrich - BSc, MSc, PhD
Macdonald, Peter - BS, MS, PhD
McLean, Stewart - BSc, PhD
Polanyi, John - MSc, PhD, DSc, FRS, FRSC
Reynolds, William - BSc, PhD
Whittington, Stuart - BA, MA, PhD

Associate Members

D'eon, Jessica - PhD
Dicks, Andy - PhD
Edgar, Landon - PhD
Li, Bowen - BScPhm, PhD
Morra, Barbora - PhD
Piunno, Paul - PhD
Reed, Mark - PhD
Stone, David - BSc, PhD

Chemistry: Chemistry MSc

The **Master of Science (MSc)** program is focused on helping students to build the research competence and background knowledge needed to pursue doctoral studies or a career in scientific research. Faculty offer opportunities for research and training in a wide range of subdisciplines, including analytical, environmental, inorganic, organic, biological, physical and polymer/materials chemistry, and at the intersections between these areas.

MSc Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the department's additional admission requirements stated below.
- Appropriate bachelor's degree from a recognized university with an average equivalent to at least a University of Toronto B+.

Completion Requirements

- **Coursework.** Students must successfully complete **1.0 graduate full-course equivalent (FCE)** including at least 0.5 graduate half-course equivalent in chemistry.
- As part of this 1.0 FCE, in Year 1, students must complete the modules in CHM3000H *Graduate Professional Development for Research and Teaching in Chemistry*.
- Students must participate in a **seminar** program. Attendance and presentation of one seminar are mandatory for this requirement to be marked completed.
- Submission of a **thesis**.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

Chemistry: Chemistry PhD

Students in the **Doctor of Philosophy (PhD) program** conduct research and scholarship at the forefront of the chemistry field. Faculty offer opportunities for research and training in a wide range of subdisciplines, including analytical, environmental, inorganic, organic, biological, physical and polymer/materials chemistry, and at the intersections between these areas.

Applicants may enter the PhD program via one of three routes: 1) following completion of an appropriate master's degree; 2) transfer from the University of Toronto master's program; or 3) direct entry following completion of an appropriate Bachelor of Science degree.

PhD students select one of the following fields:

- Analytical Chemistry
- Environmental Chemistry
- Inorganic Chemistry
- Organic and Biological Chemistry
- Physical Chemistry and Chemical Physics
- Polymers and Materials Chemistry
- Interdisciplinary, which allows combinations with the other fields, or with other disciplines

Students select their field by enrolling in the corresponding research course and seminar program during their first academic session of the program, after selecting their faculty supervisor. In the case of the Interdisciplinary field, a written request for admission must be submitted to the Associate Chair for Graduate Studies, along with a letter of support from the research supervisor. A written request and accompanying letter of support from the research supervisor are also required from students who wish to change fields during their PhD studies.

Each field has specific requirements and requires a minimum of 2.5 to 3.5 full-course equivalents (FCEs) from approved graduate courses, depending on the field of study and the student's academic background. The number of courses required will be determined in consultation with the supervisor.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must submit a complete application according to the instructions and must satisfy the Department of Chemistry's additional admission requirements.
- Appropriate master's degree from a recognized university with a minimum average equivalent to at least a University of Toronto B+.

Completion Requirements

Coursework. Students must successfully complete **2.5 to 3.5 full-course equivalents (FCEs)** as follows:

- 2.0 to 3.0 FCEs from approved graduate courses relevant to the student's declared field. The required number of FCEs, along with the specific courses that are required, vary by field, as outlined in the field requirements below. Doctoral students may request a course reduction for up to two half-course equivalents taken from an appropriate MSc program. The request is to be accompanied by a rationale indicating the justification for the course reduction in the context of the knowledge base and skill set required for the student's doctoral studies and is to be signed by the thesis supervisor.
- Completion of the modules in CHM3000H *Graduate Professional Development for Research and Teaching in Chemistry* in Year 1. The requirement is waived if a student successfully completed this course at the master's level.

In addition to the above coursework, students must complete the following:

- Presentation of **two seminars**, specific to the student's field, and completion of **set field seminar requirements** (0.0 FCE; Credit/No Credit), as outlined in the field listings. Certain fields may require the completion of more presentations.
- Students must complete a minimum of **18 hours of professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 4 of the program to fulfil the 18-hour requirement.
- Further requirements specific to the declared field, as outlined in each field listing.
- **Oral comprehensive field examination.** Students must successfully complete an oral comprehensive field examination in their declared field by the end of Year 3.
- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a presented in a written thesis and successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must submit a complete application according to the instructions and must also satisfy the Department of Chemistry's additional admission requirements.
- Transfer to the PhD program may be considered during Year 1 of the master's program. Students applying for the transfer should have completed 1.0 full-course equivalent (FCE) of graduate courses and must have the support of their supervisor.

Completion Requirements

Coursework. Students must successfully complete **2.5 to 3.5 full-course equivalents (FCEs)** as follows:

- 2.0 to 3.0 FCEs from approved graduate courses relevant to the student's declared field. The required number of FCEs, along with the specific courses that are required, vary by field, as outlined in the field requirements below. Coursework completed in the master's program may count toward this requirement where applicable; doctoral students may request a course reduction for up to two half course equivalents taken from an appropriate MSc program. The request is to be accompanied by a rationale indicating the justification for the course reduction in the context of the knowledge base and skill set required for the student's doctoral studies and is to be signed by the thesis supervisor.
- Completion of the modules in CHM3000H *Graduate Professional Development for Research and Teaching in Chemistry* in Year 1. The requirement is waived if a student successfully completed this course at the master's level.

In addition to the above coursework, students must complete the following:

- Presentation of **two seminars**, specific to the student's field, and completion of set **field seminar requirements** (0.0 FCE; Credit/No Credit), as outlined in the field listings. Certain fields may require the completion of more presentations.
- Students must complete a minimum of **24 hours of professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 5 of the program to fulfil the 24-hour requirement.
- Further requirements specific to the declared field, as outlined in each field listing.
- **Oral comprehensive field examination.** Students must successfully complete an oral comprehensive field examination in their declared field by the end of Year 4.
- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a presented in a written thesis and successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must submit a complete application according to the instructions and must also satisfy the Department of Chemistry's additional admission requirements.
- Exceptional students with an appropriate Bachelor of Science degree may be added directly to the PhD program.

Completion Requirements

Coursework. Students must successfully complete **2.5 to 3.5 full-course equivalents (FCEs)** as follows:

- 2.0 to 3.0 FCEs from approved graduate courses relevant to the student's declared field. The required number of FCEs, along with the specific courses that are required, vary by field, as outlined in the field requirements below.
- Completion of the modules in CHM3000H *Graduate Professional Development for Research and Teaching in Chemistry* in Year 1.

In addition to the above coursework, students must complete the following:

- Presentation of **two seminars**, specific to the student's field, and completion of set **field seminar requirements** (0.0 FCE; Credit/No Credit), as outlined in the field listings. Certain fields may require the completion of more presentations.
- Students must complete a minimum of **24 hours of professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 5 of the program to fulfil the 24-hour requirement.
- Further requirements specific to the declared field, as outlined in each field listing.
- **Oral comprehensive field examination.** Students must successfully complete an oral comprehensive field examination in their declared field by the end of Year 4.
- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a presented in a written thesis and successfully defended at a Final Oral Examination.

Note: to build the skills needed to conceptualize, design, and implement research in chemistry, direct-entry PhD students may expect to undertake two more academic sessions of research than students who enter the PhD program at the outset of their program.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Chemistry: Chemistry PhD; Field: Analytical Chemistry

PhD Program; Field: Analytical Chemistry

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must submit a complete application according to the instructions, and must satisfy the Department of Chemistry's additional admission requirements.
- Appropriate master's degree from a recognized university with a minimum average equivalent to at least a University of Toronto B+.

Completion Requirements

Coursework. Students must successfully complete a total of **3.0 full-course equivalents (FCEs)** as follows:

- 2.0 FCEs from analytical chemistry in each of the areas of spectroscopy, separation science/electrochemistry, and advanced instrumentation/data analysis (0.5 FCE from each area). Courses are selected in consultation with the supervisor.
- Students must complete an additional 0.5 FCE to support the research program.

- In Year 1, students must complete the **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry*. The requirement is waived if a student successfully completed this course at the master's level.
- Doctoral students may request a course reduction of up to two half-course equivalents taken from an appropriate MSc program. The request is to be accompanied by a rationale indicating the justification for the course reduction in the context of the knowledge base and skill set required for the student's doctoral studies and is to be signed by the thesis supervisor.

In addition to the above coursework, students must complete the following:

- Presentation of **two seminars and annual participation** in CHM1190Y *Analytical Chemistry Seminar*. Students must complete 25 Analytical Seminar Plus (ASP) points (PDF).
- A minimum of **18 hours of professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 4 of the program to fulfil the 18-hour requirement.
- **Oral comprehensive field examination**, to be successfully completed in the student's declared field by the end of Year 3.
- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a written thesis and successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program; Field: Analytical Chemistry (Transfer)

Transfer Requirements

- Transfer to the PhD program may be considered during Year 1 of the master's program. After one year of study in the MSc, students may apply for the transfer having completed 1.0 FCE of graduate courses and having the support of their supervisor.

Completion Requirements

Coursework. Students must successfully complete a total of **3.0 full-course equivalents (FCEs)** from approved graduate courses:

- 2.0 FCEs from analytical chemistry in each of the areas of spectroscopy, separation science/electrochemistry, and advanced instrumentation/data analysis (0.5 FCE from each area). Courses are selected in consultation with the supervisor.
- Students must complete an additional 0.5 FCE to support the research program.
- In Year 1, students must complete the **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry*. The requirement is waived if a student successfully completed this course at the master's level.
- Coursework completed in the master's program may count toward this requirement where applicable; doctoral students may request a course reduction of up to two half-course equivalents taken from an appropriate MSc program. The request is to be accompanied by a rationale indicating the justification for the course reduction in the context of the knowledge base and skill set required for the student's doctoral studies and is to be signed by the thesis supervisor.

In addition to the above coursework, students must complete the following:

- Presentation of **two seminars and annual participation** in CHM1190Y *Analytical Chemistry Seminar*. Students must complete 25 Analytical Seminar Plus (ASP) points (PDF).
- A minimum of **24 hours of professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 5 of the program to fulfil the 24-hour requirement.
- **Oral comprehensive field examination**, to be successfully completed in the student's declared field by the end of Year 4.
- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a written thesis and successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program; Field: Analytical Chemistry (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must submit a complete application according to the instructions, and must satisfy the Department of Chemistry's additional admission requirements.
- An exceptional student with an appropriate Bachelor of Science degree may be admitted directly to the PhD program.

Completion Requirements

Coursework. Students must successfully complete a total of **3.0 full-course equivalents (FCEs)** from approved graduate courses:

- 2.0 FCEs from analytical chemistry in each of the areas of spectroscopy, separation science/electrochemistry, and advanced instrumentation/data analysis (0.5 FCE from each area).
- Students must complete an additional 0.5 FCE to support the research program.
- In Year 1, students must complete the **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry*.

Note: to build the skills needed to conceptualize, design, and implement research in chemistry, direct-entry PhD students can expect to undertake **two more academic sessions of research** than students who enter the PhD program at the outset of their program.

In addition to the above coursework, students must complete the following:

- Presentation of **two seminars**. Participation in CHM1190Y *Analytical Chemistry Seminar*. Students must complete 25 Analytical Seminar Plus (ASP) points (PDF).
- A minimum of **24 hours of additional professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 5 of the program to fulfil the 24-hour requirement.
- **Oral comprehensive field examination**, to be successfully completed in the student's declared field by the end of Year 4.
- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a written thesis and successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Chemistry: Chemistry PhD; Field: Environmental Chemistry

PhD Program; Field: Environmental Chemistry

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must submit a complete application according to the instructions, and must satisfy the Department of Chemistry's additional admission requirements.
- Appropriate master's degree from a recognized university with a minimum average equivalent to at least a University of Toronto B+.

Completion Requirements

Coursework. Students must successfully complete a total of **2.5 full-course equivalents (FCEs)** as follows:

- CHM1401H *Transport and Fate of Chemical Species in the Environment*.
- 0.5 FCE in further Environmental Chemistry courses.
- An additional 1.0 FCE of course to be chosen in consultation with the supervisor/supervisory committee and confirmed by the field representative. Of this final 1.0 FCE, 0.5 FCE must be a CHM-coded course and 0.5 FCE may be an approved course offered in a cognate unit.
- In Year 1, students must complete the **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry*. The requirement is waived if a student completed this course at the master's level.
- Doctoral students may request a course reduction of up to two half-course equivalents taken from an appropriate MSc program. The request is to be accompanied by a rationale indicating the justification for the course reduction in the context of the knowledge base and skill set required for the student's doctoral studies and is to be signed by the thesis supervisor.

In addition to the above coursework, students must complete the following:

- Presentation of **two seminars and annual participation** in CHM1590Y *Environmental Chemistry Seminar*.
- A minimum of **18 hours of professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 4 of the program to fulfil the 18-hour requirement
- A written **research proposal**, defended orally, on a topic other than the primary research topic delivered prior to the end of Year 2.
- **Oral comprehensive field examination**, to be successfully completed in the student's declared field by the end of Year 3.
- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a written thesis and successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program; Field: Environmental Chemistry (Transfer)

Transfer Requirements

- Transfer to the PhD program may be considered during Year 1 of the master's program. After one year of study in the MSc, students may apply for the transfer having completed 1.0 FCE of graduate courses and having the support of their supervisor.

Completion Requirements

Coursework. Students must successfully complete a total of **2.5 full-course equivalents (FCEs)** as follows:

- CHM1401H *Transport and Fate of Chemical Species in the Environment*.
- 0.5 FCE in further Environmental Chemistry courses.
- An additional 1.0 FCE of courses to be chosen in consultation with the supervisor/supervisory committee and confirmed by the field representative. Of this final 1.0 FCE, 0.5 FCE must be a CHM-coded course and 0.5 FCE may be an approved course offered in a cognate unit.
- In Year 1, students must complete the **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry*.
- Coursework completed in the master's program may count toward this requirement where applicable; doctoral students may request a course reduction of up to two half-course equivalents taken from an appropriate MSc program. The request is to be accompanied by a rationale indicating the justification for the course reduction in the context of the knowledge base and skill set required for the student's doctoral studies and is to be signed by the thesis supervisor.

In addition to the above coursework, students must complete the following:

- Presentation of **two seminars and annual participation** in CHM1590Y *Environmental Chemistry Seminar*.
- A minimum of **24 hours of professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 5 of the program to fulfil the 24-hour requirement.
- A written **research proposal**, defended orally, on a topic other than the primary research topic delivered prior to the end of Year 2.
- **Oral comprehensive field examination**, to be successfully completed in the student's declared field by the end of Year 4.
- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a written thesis and successfully defended at a Final Oral Examination.

Mode of Delivery: In person

Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program; Field: Environmental Chemistry (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must submit a complete application according to the instructions, and must satisfy the Department of Chemistry's additional admission requirements.
- An exceptional student with an appropriate Bachelor of Science degree may be admitted directly to the PhD program.

Completion Requirements

Coursework. Students must successfully complete a total of **2.5 full-course equivalents (FCEs)** as follows:

- CHM1401H *Transport and Fate of Chemical Species in the Environment*.
- 0.5 FCE in further Environmental Chemistry courses.
- An additional 1.0 FCE of courses to be chosen in consultation with the supervisor/supervisory committee and confirmed by the field representative. Of this final 1.0 FCE, 0.5 FCE must be a CHM-coded course and 0.5 FCE may be an approved course offered in a cognate unit.
- In Year 1, students must complete the **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry*.

Note: to build the skills needed to conceptualize, design, and implement research in chemistry, direct-entry PhD students may expect to undertake **two more academic sessions of research** than students who enter the PhD program at the outset of their program.

In addition to the above coursework, students must complete the following:

- Presentation of **two seminars and annual participation** in CHM1590Y *Environmental Chemistry Seminar*.
- A minimum of **24 hours of professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 5 of the program to fulfil the 24-hour requirement.
- A written **research proposal**, defended orally, on a topic other than the primary research topic delivered prior to the end of Year 2.
- **Oral comprehensive field examination**, to be successfully completed in the student's declared field by the end of Year 4.

- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a written thesis and successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Chemistry: Chemistry PhD; Field: Inorganic Chemistry

PhD Program; Field: Inorganic Chemistry

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must submit a complete application according to the instructions, and must satisfy the Department of Chemistry's additional admission requirements.
- Appropriate master's degree from a recognized university with a minimum average equivalent to at least a University of Toronto B+.

Completion Requirements

Coursework. Students must successfully complete a total of **2.5 full-course equivalents (FCEs)** as follows:

- 0.5 FCE: either CHM1270H *Frontiers in Inorganic Chemistry* **or** CHM1266H *Physical Methods in Inorganic Chemistry*.
- 1.5 FCEs from approved graduate courses.
- Doctoral students may request a course reduction of up to two half-course equivalents taken from an appropriate MSc program. The request is to be accompanied by a rationale indicating the justification for the course reduction in the context of the knowledge base and skill set required for the student's doctoral studies and is to be signed by the thesis supervisor.
- In Year 1, students must complete the **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry*.

In addition to the above coursework, students must complete the following:

- Annual participation in CHM1290Y *Inorganic Chemistry Seminar*: the presentation of **one seminar each year** in Years 2, 3, and 4, including one on an original research proposal.
- A minimum of **18 hours of professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 4 of the program to fulfil the 18-hour requirement.
- **Oral comprehensive field examination**, to be successfully completed in the student's declared field by the end of Year 4.
- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a written thesis and successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program; Field: Inorganic Chemistry (Transfer)

Transfer Requirements

- Transfer to the PhD program may be considered during Year 1 of the master's program. After one year of study in the MSc, students may apply for the transfer having completed 1.0 FCE of graduate courses and having the support of their supervisor.

Completion Requirements

Coursework. Students must successfully complete a total of **2.5 full-course equivalents (FCEs)** as follows:

- 0.5 FCE: either CHM1270H *Frontiers in Inorganic Chemistry* **or** CHM1266H Physical Methods in Inorganic Chemistry.
- 1.5 FCEs from approved graduate courses.
- Coursework completed in the master's program may count toward this requirement where applicable; doctoral students may request a course reduction of up to two half-course equivalents taken from an appropriate MSc program. The request is to be accompanied by a rationale indicating the justification for the course reduction in the context of the knowledge base and skill set required for the student's doctoral studies and is to be signed by the thesis supervisor.
- In Year 1, students must complete the modules in **CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry*.

In addition to the above coursework, students must complete the following:

- Annual participation in CHM1290Y *Inorganic Chemistry Seminar*: the presentation of **one seminar each year** in Years 2, 3, and 4, including one on an original research proposal.
- A minimum of **24 hours of professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 5 of the program to fulfil the 24-hour requirement.

- **Oral comprehensive field examination**, to be successfully completed in the student's declared field by the end of Year 4.
- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a written thesis and successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program; Field: Inorganic Chemistry (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must submit a complete application according to the instructions, and must satisfy the Department of Chemistry's additional admission requirements.
- An exceptional student with an appropriate Bachelor of Science degree may be admitted directly to the PhD program.

Completion Requirements

Coursework. Students must successfully complete a total of **2.5 full-course equivalents (FCEs)** as follows:

- 0.5 FCE: either CHM1270H *Frontiers in Inorganic Chemistry* **or** CHM1266H *Physical Methods in Inorganic Chemistry*.
- 1.5 FCEs from approved graduate courses.
- In Year 1, students must complete the **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry*.

Note: to build the skills needed to conceptualize, design, and implement research in chemistry, direct-entry PhD students may expect to undertake **two more academic sessions of research** than students who enter the PhD program at the outset of their program.

In addition to the above coursework, students must complete the following:

- Annual participation in CHM1290Y *Inorganic Chemistry Seminar*: the presentation of **one seminar each year** in Years 2, 3, and 4, including one on an original research proposal.
- Students must complete a minimum of **24 hours of professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 5 of the program to fulfil the 24-hour requirement.
- **Oral comprehensive field examination.** Students must successfully complete an oral comprehensive field examination in their declared field by the end of Year 4.
- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a written thesis and successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Chemistry: Chemistry PhD; Field: Organic and Biological Chemistry

PhD Program; Field: Organic and Biological Chemistry

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must submit a complete application according to the instructions, and must satisfy the Department of Chemistry's additional admission requirements.
- Appropriate master's degree from a recognized university with a minimum average equivalent to at least a University of Toronto B+.

Completion Requirements

Coursework. Students must successfully complete a total of **2.5 full-course equivalents (FCEs)** by selecting one of the following paths:

- **Organic Chemistry path** requiring
  - 1.0 FCE from Organic Chemistry half courses selected from CHM1040H to CHM1060H (inclusive).
  - 1.0 FCE from approved graduate courses.
  - In Year 1, the **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry*. The requirement is waived if a student successfully completed this course at the master's level.

  or

- **Biological Chemistry path** requiring
  - 2.0 FCEs from approved graduate courses, to be chosen in consultation with the supervisor/supervisory committee and confirmed by the field representative. 1.0 FCE must be from discipline-specific CHM-coded courses and 1.0 FCE may be from approved courses in cognate units. At least 1.0 FCE must be from courses that are not cross-listed as undergraduate courses.

    - In Year 1, the **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry*. The requirement is waived if a student successfully completed this course at the master's level.
- Doctoral students may request a course reduction of up to two half-course equivalents taken from an appropriate MSc program. The request is to be accompanied by a rationale indicating the justification for the course reduction in the context of the knowledge base and skill set required for the student's doctoral studies and is to be signed by the thesis supervisor.

In addition to the above coursework, students must complete the following:

- **Annual participation** in CHM1090Y *Organic Chemistry Seminar*: present **two seminars**, normally in Years 2 and 4.
- A minimum of **18 hours of professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 4 of the program to fulfil the 18-hour requirement.
- Students must pass **six cumulative exams** in order for students to qualify for the oral comprehensive field exam and advance to PhD candidacy. They are generally written on the first Friday of the month from October through May (inclusive).
- **Oral comprehensive field examination**, to be successfully completed in the student's declared field by the end of Year 4.
- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a written thesis and successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program; Field: Organic and Biological Chemistry (Transfer)

Transfer Requirements

- Transfer to the PhD program may be considered during Year 1 of the master's program. After one year of study in the MSc, students may apply for the transfer having completed 1.0 FCE of graduate courses and having the support of their supervisor.

Completion Requirements

Coursework. Students must successfully complete a total of **2.5 full-course equivalents (FCEs)** by selecting one of the following paths:

- **Organic Chemistry path** requiring
    - 1.0 FCE from Organic Chemistry half courses selected from CHM1040H to CHM1060H (inclusive).
    - 1.0 FCE from approved graduate courses.
    - In Year 1, the **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry*. The requirement is waived if a student successfully completed this course at the master's level.

or

- **Biological Chemistry path** requiring
    - 2.0 FCEs from approved graduate courses, to be chosen in consultation with the supervisor/ supervisory committee and confirmed by the field representative. 1.0 FCE must be from discipline-specific CHM-coded courses and 1.0 FCE may be from approved courses in cognate units. At least 1.0 FCE must be from courses that are not cross-listed as undergraduate courses.
    - In Year 1, the **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry*. The requirement is waived if a student successfully completed this course at the master's level.
- Coursework completed in the master's program may count toward this requirement where applicable; doctoral students may request a course reduction of up to two half-course equivalents taken from an appropriate MSc program. The request is to be accompanied by a rationale indicating the justification for the course reduction in the context of the knowledge base and skill set required for the student's doctoral studies and is to be signed by the thesis supervisor.

In addition to the above coursework, students must complete the following:

- **Annual participation** in CHM1090Y *Organic Chemistry Seminar*: present **two seminars**, normally in Years 2 and 4.
- A minimum of **24 hours of professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 5 of the program to fulfil the 24-hour requirement.
- Students must pass **six cumulative exams** in order for students to qualify for the oral comprehensive field exam and advance to PhD candidacy. They are generally written on the first Friday of the month from October through May (inclusive).
- **Oral comprehensive field examination**, to be successfully completed in the student's declared field by the end of Year 4.
- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a written thesis and successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program; Field: Organic and Biological Chemistry (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must submit a complete application according to the instructions, and must satisfy the Department of Chemistry's additional admission requirements.
- An exceptional student with an appropriate Bachelor of Science degree may be admitted directly to the PhD program.

Completion Requirements

Coursework. Students must successfully complete a total of **2.5 full-course equivalents (FCEs)** by selecting one of the following paths:

- **Organic Chemistry path** requiring
  - 1.0 FCE from Organic Chemistry half courses selected from CHM1040H to CHM1060H (inclusive).
  - 1.0 FCE from approved graduate courses.
  - In Year 1, the **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry*.

  or

- **Biological Chemistry path** requiring
  - 2.0 FCEs from approved graduate courses, to be chosen in consultation with the supervisor/supervisory committee and confirmed by the field representative. 1.0 FCE must be from discipline-specific CHM-coded courses and 1.0 FCE may be from approved courses in cognate units. At least 1.0 FCE must be from courses that are not cross-listed as undergraduate courses.
  - In Year 1, the **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry*.
- Coursework completed in the master's program may count toward this requirement where applicable; doctoral students may request a course reduction of up to two half-course equivalents taken from an appropriate MSc program. The request is to be accompanied by a rationale indicating the justification for the course reduction in the context of the knowledge base and skill set required for the student's doctoral studies and is to be signed by the thesis supervisor.

Note: to build the skills needed to conceptualize, design, and implement research in chemistry, direct-entry PhD students may expect to undertake **two more academic sessions of research** than students who enter the PhD program at the outset of their program.

In addition to the above coursework, students must complete the following:

- **Annual participation** in CHM1090Y *Organic Chemistry Seminar*: present **two seminars**, normally in Years 2 and 4.
- A minimum of **24 hours of professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 5 of the program to fulfil the 24-hour requirement.
- Students must pass **six cumulative exams** in order for students to qualify for the oral comprehensive field exam and advance to PhD candidacy. They are generally written on the first Friday of the month from October through May (inclusive).
- **Oral comprehensive field examination**, to be successfully completed in the student's declared field by the end of Year 4.
- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a written thesis and successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Chemistry: Chemistry PhD; Field: Physical Chemistry and Chemical Physics

PhD Program; Field: Physical Chemistry and Chemical Physics

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must submit a complete application according to the instructions, and must satisfy the Department of Chemistry's additional admission requirements.
- Appropriate master's degree from a recognized university with a minimum average equivalent to at least a University of Toronto B+.

Completion Requirements

Coursework. Students must select one of the following paths:

- **Experimental Physical Chemistry path** requiring successful completion of **2.5 full-course equivalents (FCEs)**:
  - 1.0 FCE in core courses from the following: CHM1478H, CHM1480H, CHM1482H, CHM1488H.
  - 1.0 FCE in other half courses selected in consultation with the research director. The principle is that breadth of background preparation should be the major objective in course selection.
  - In Year 1, the **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry*. The requirement is waived if a student successfully completed this course at the master's level.

  or

- **Theoretical Physical Chemistry path** requiring successful completion of **3.5 FCEs**:
  - 1.0 FCE in core courses from the following: CHM1478H, CHM1480H, CHM1482H, CHM1488H.
  - 2.0 FCEs in other half courses selected in consultation with the research director.
  - In Year 1, the **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry*. The requirement is waived if a student successfully completed this course at the master's level.
- Doctoral students may request a course reduction of up to two half-course equivalents taken from an appropriate MSc program. The request is to be accompanied by a rationale indicating the justification for the course reduction in the context of the knowledge base and skill set required for the student's doctoral studies and is to be signed by the thesis supervisor.

In addition to the above coursework, students must complete the following:

- **Annual participation** in CHM1490Y *Physical Chemistry Seminar:* presentation of **two seminars**, normally in Years 2 and 4.
- A minimum of **18 hours of professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 4 of the program to fulfil the 18-hour requirement.
- **Oral comprehensive field examination**, to be successfully completed in the student's declared field by the end of Year 4.
- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a written thesis and successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program; Field: Physical Chemistry and Chemical Physics (Transfer)

Transfer Requirements

- Transfer to the PhD program may be considered during Year 1 of the master's program. After one year of study in the MSc, students may apply for the transfer having completed 1.0 FCE of graduate courses and having the support of their supervisor.

Completion Requirements

Coursework. Students must select one of the following paths:

- **Experimental Physical Chemistry path** requiring successful completion of **2.5 full-course equivalents (FCEs)**:
  - 1.0 FCE in core courses from the following: CHM1478H, CHM1480H, CHM1482H, CHM1488H.
  - 1.0 FCE in other half courses selected in consultation with the research director. The principle is that breadth of background preparation should be the major objective in course selection.
  - In Year 1, the **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry*. The requirement is waived if a student successfully completed this course at the master's level.

or

- **Theoretical Physical Chemistry path** requiring successful completion of **3.5 FCEs**:
  - 1.0 FCE in core courses from the following: CHM1478H, CHM1480H, CHM1482H, CHM1488H.
  - 2.0 FCEs in other half courses selected in consultation with the research director.
  - In Year 1, the **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry*. The requirement is waived if a student successfully completed this course at the master's level.
- Doctoral students may request a course reduction of up to two half-course equivalents taken from an appropriate MSc program. The request is to be accompanied by a rationale indicating the justification for the course reduction in the context of the knowledge base and skill set required for the student's doctoral studies and is to be signed by the thesis supervisor.

In addition to the above coursework, students must complete the following:

- **Annual participation** in CHM1490Y *Physical Chemistry Seminar:* presentation of **two seminars**, normally in Years 2 and 4.
- A minimum of **24 hours of professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 4 of the program to fulfil the 24-hour requirement.
- **Oral comprehensive field examination**, to be successfully completed in the student's declared field by the end of Year 4.
- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a written thesis and successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program; Field: Physical Chemistry and Chemical Physics (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must submit a complete application according to the instructions, and must satisfy the Department of Chemistry's additional admission requirements.
- An exceptional student with an appropriate BSc degree may be admitted directly to the PhD program.

Completion Requirements

Coursework. Students must select one of the following paths:

- **Experimental Physical Chemistry path** requiring successful completion of **2.5 full-course equivalents (FCEs)**:
  - 1.0 FCE in core courses from the following: CHM1478H, CHM1480H, CHM1482H, CHM1488H.
  - 1.0 FCE in other half courses selected in consultation with the research director. The principle is that breadth of background preparation should be the major objective in course selection.
  - In Year 1, the **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry*. The requirement is waived if a student successfully completed this course at the master's level.

  or

- **Theoretical Physical Chemistry path** requiring successful completion of **3.5 FCEs**:
  - 1.0 FCE in core courses from the following: CHM1478H, CHM1480H, CHM1482H, CHM1488H.
  - 2.0 FCEs in other half courses selected in consultation with the research director.
  - In Year 1, the **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry*. The requirement is waived if a student successfully completed this course at the master's level.
- Doctoral students may request a course reduction of up to two half-course equivalents taken from an appropriate MSc program. The request is to be accompanied by a rationale indicating the justification for the course reduction in the context of the knowledge base and skill set required for the student's doctoral studies and is to be signed by the thesis supervisor.

Note: to build the skills needed to conceptualize, design, and implement research in chemistry, direct-entry PhD students can expect to undertake **two more academic sessions of research** than students who enter the PhD program at the outset of their program.

In addition to the above coursework, students must complete the following:

- **Annual participation** in CHM1490Y *Physical Chemistry Seminar:* presentation of **two seminars**, normally in Years 2 and 4.
- A minimum of **24 hours of professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 4 of the program to fulfil the 24-hour requirement.
- **Oral comprehensive field examination**, to be successfully completed in the student's declared field by the end of Year 4.
- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a written thesis and successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Chemistry: Chemistry PhD; Field: Polymers and Materials Chemistry

PhD Program; Field: Polymers and Materials Chemistry

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must submit a complete application according to the instructions, and must satisfy the Department of Chemistry's additional admission requirements.
- Appropriate master's degree from a recognized university with a minimum average equivalent to at least a University of Toronto B+.

Completion Requirements

Coursework. Students must successfully complete a total of **2.5 full-course equivalents (FCEs)** as follows:

- CHM1206H *Solid State Chemistry: Structure-Property Relations*.
- CHM1301H *Organic and Inorganic Polymer Synthesis*.
- CHM1302H *Physical Chemistry of Polymers*.
- 0.5 FCE from other courses considered appropriate to the Polymers and Materials Chemistry research area.
- Doctoral students may request a course reduction of up to two half-course equivalents taken from an appropriate MSc program. The request is to be accompanied by a rationale indicating the justification for the course reduction in the context of the knowledge base and skill set required for the student's doctoral studies and is to be signed by the thesis supervisor.

- In Year 1, students must complete the **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry*. The requirement is waived if a student successfully completed this course at the master's level.

In addition to the above coursework, students must complete the following:

- Presentation of at least **three seminars** (a literature talk in Year 1 and presentations on the original research in Years 2 and 4). Annual participation in CHM1390Y *Polymers and Materials Chemistry Seminar*.
- A minimum of **18 hours of professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 4 of the program to fulfil the 18-hour requirement.
- **Oral comprehensive field examination**, to be successfully completed in the student's declared field by the end of Year 3.
- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a written thesis and successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program; Field: Polymers and Materials Chemistry (Transfer)

Transfer Requirements

- Transfer to the PhD program may be considered during Year 1 of the master's program. After one year of study in the MSc, students may apply for the transfer having completed 1.0 FCE of graduate courses and having the support of their supervisor.

Completion Requirements

Coursework. Students must successfully complete **2.5 full-course equivalents (FCEs)** as follows:

- CHM1206H *Solid State Chemistry: Structure-Property Relations*.
- CHM1301H *Organic and Inorganic Polymer Synthesis*.
- CHM1302H *Physical Chemistry of Polymers*.
- 0.5 FCE from other courses considered appropriate to the Polymers and Materials Chemistry research area.
- Coursework completed in the master's program may count toward this requirement where applicable; doctoral students may request a course reduction of up to two half-course equivalents taken from an appropriate MSc program. The request is to be accompanied by a rationale indicating the justification for the course reduction in the context of the knowledge base and skill set required for the student's doctoral studies and is to be signed by the thesis supervisor.
- In Year 1, students must complete the **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry*. The requirement is waived if a student successfully completed this course at the master's level.

In addition to the above coursework, students must complete the following:

- Presentation of at least **three seminars** (a literature talk in Year 1 and presentations on the original research in Years 2 and 4). Annual participation in CHM1390Y *Polymers and Materials Chemistry Seminar*.
- A minimum of **24 hours of professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 5 of the program to fulfil the 24-hour requirement.
- **Oral comprehensive field examination**, to be successfully completed in the student's declared field by the end of Year 4.
- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a written thesis and successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program; Field: Polymers and Materials Chemistry (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must submit a complete application according to the instructions, and must satisfy the Department of Chemistry's additional admission requirements.
- An exceptional student with an appropriate Bachelor of Science degree may be admitted directly to the PhD program.

Completion Requirements

Coursework. Students must successfully complete **2.5 full-course equivalents (FCEs)** as follows:

- CHM1206H *Solid State Chemistry: Structure-Property Relations*.
- CHM1301H *Organic and Inorganic Polymer Synthesis*.
- CHM1302H *Physical Chemistry of Polymers*.
- 0.5 FCE from other courses considered appropriate to the Polymers and Materials Chemistry research area.

- The **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry* in Year 1.

Note: to build the skills needed to conceptualize, design, and implement research in chemistry, direct-entry PhD students may expect to undertake **two more academic sessions of research** than students who enter the PhD program at the outset of their program.

In addition to the above coursework, students must complete the following:

- Presentation of at least **three seminars** (a literature talk in Year 1 and presentations on the original research in Years 2 and 4). Annual participation in CHM1390Y *Polymers and Materials Chemistry Seminar*.
- A minimum of **24 hours of professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 5 of the program to fulfil the 24-hour requirement.
- **Oral comprehensive field examination**, to be successfully completed in the student's declared field by the end of Year 4.
- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a written thesis and successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Chemistry: Chemistry PhD; Field: Interdisciplinary

PhD Program; Field: Interdisciplinary

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must submit a complete application according to the instructions, and must satisfy the Department of Chemistry's additional admission requirements.
- Appropriate master's degree from a recognized university with a minimum average equivalent to at least a University of Toronto B+.
- Acceptance into this field requires a research topic of a truly interdisciplinary nature; a written request must be submitted to the Graduate Coordinator along with a letter from the PhD supervisor.

Completion Requirements

Coursework. Students must successfully complete a total of **2.5 full-course equivalents (FCEs)** as follows:

- 2.0 FCEs including at least one half course from one of the other listed fields.
- Doctoral students may request a course reduction of up to two half-course equivalents taken from an appropriate MSc program. The request is to be accompanied by a rationale indicating the justification for the course reduction in the context of the knowledge base and skill set required for the student's doctoral studies and is to be signed by the thesis supervisor.
- The **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry* in Year 1.

In addition to the above coursework, students must complete the following:

- Presentation of at least **two seminars** (normally in Years 2 and 4). Annual participation in the seminar program and seminar course (0.0 FCE; Credit/No Credit) of an existing field of Chemistry.
- A minimum of **18 hours of professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 4 of the program to fulfil the 18-hour requirement.
- Further requirements specific to the program plan developed for the Interdisciplinary field specific to each admitted student to the field.
- **Oral comprehensive field examination**, to be successfully completed in the student's declared field by the end of Year 3.
- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a written thesis and successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program; Field: Interdisciplinary (Transfer)

Transfer Requirements

- Transfer to the PhD program may be considered during Year 1 of the master's program. After one year of study in the MSc, students may apply for the transfer having completed 1.0 FCE of graduate courses and having the support of their supervisor.

Completion Requirements

Coursework. Students must successfully complete a total of **2.5 full-course equivalents (FCEs)** as follows:

- 2.0 FCEs including at least one half course from one of the other listed fields.
- Coursework completed in the master's program may count toward this requirement where applicable; doctoral students may request a course reduction of up to two half-course equivalents taken from an appropriate MSc program. The request is to be accompanied by a rationale indicating the justification for the course reduction in the context of the knowledge base and skill set required for the student's doctoral studies and is to be signed by the thesis supervisor.
- The **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry* in Year 1.

In addition to the above coursework, students must complete the following:

- Presentation of at least **two seminars** (normally in Years 2 and 4). Annual participation in the seminar program and seminar course (0.0 FCE; Credit/No Credit) of an existing field of Chemistry.
- A minimum of **24 hours of professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 5 of the program to fulfil the 24-hour requirement.
- Further requirements specific to the program plan developed for the Interdisciplinary field specific to each admitted student to the field.
- **Oral comprehensive field examination**, to be successfully completed in the student's declared field by the end of Year 3.
- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a written thesis and successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program; Field: Interdisciplinary (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must submit a complete application according to the instructions, and must satisfy the Department of Chemistry's additional admission requirements.
- An exceptional student with an appropriate Bachelor of Science degree may be admitted directly to the PhD program.
- Acceptance into this field requires a research topic of a truly interdisciplinary nature; a written request must be submitted to the Graduate Coordinator along with a letter from the PhD supervisor.

Completion Requirements

Coursework. Students must successfully complete a total of **2.5 full-course equivalents (FCEs)** as follows:

- 2.0 FCEs including at least one half course from one of the other listed fields.
- Doctoral students may request a course reduction of up to two half-course equivalents taken from an appropriate MSc program. The request is to be accompanied by a rationale indicating the justification for the course reduction in the context of the knowledge base and skill set required for the student's doctoral studies and is to be signed by the thesis supervisor.
- The **modules in CHM3000H** *Graduate Professional Development for Research and Teaching in Chemistry* in Year 1. The requirement is waived if a student successfully completed this course at the master's level.

Note: to build the skills needed to conceptualize, design, and implement research in chemistry, direct-entry PhD students may expect to undertake **two more academic sessions of research** than students who enter the PhD program at the outset of their program.

In addition to the above coursework, students must complete the following:

- Presentation of at least **two seminars** (normally in Years 2 and 4). Annual participation in the seminar program and seminar course (0.0 FCE; Credit/No Credit) of an existing field of Chemistry.
- A minimum of **24 hours of professional development training** spread evenly over the categories: Communication, Personal Effectiveness, and Research and Teaching Skills. Consult with the Graduate Office for a list of eligible activities. Typically, students are expected to complete roughly six hours of additional professional development training per year in Years 2 to 5 of the program to fulfil the 24-hour requirement.
- Further requirements specific to the program plan developed for the Interdisciplinary field specific to each admitted student to the field.
- **Oral comprehensive field examination**, to be successfully completed in the student's declared field by the end of Year 3.
- **Thesis.** The main requirement for the PhD program is the execution of an original investigation that is presented in a written thesis and successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Chemistry: Chemistry MSc, PhD Courses

Not all courses are offered every year. Please consult the department each session as to course availability.

All graduate courses for degree credit must be approved by the department. Subject to departmental permission, degree students in chemistry may take a limited number of graduate courses based on fourth-year Faculty of Arts and Science courses in chemistry or a cognate discipline. Approvals of such fourth-year courses will be considered on an individual basis. Third-year arts and science courses, or their essential equivalents, will not receive degree credit.

Professional Development

Course Code	Course Title
CHM3000H	Graduate Professional Development for Research and Teaching in Chemistry

Analytical Chemistry

Course Code	Course Title
CHM1102H	Biosensors and Chemical Sensors
CHM1103H	Advanced Topics in Analytical Chemistry
CHM1104H	Separation Science
CHM1105H	Separations, Chromatography, and Microfluidics
CHM1106H	Lab Instrumentation
CHM1107H	The -Omics Revolution and Mass Spectrometry
CHM1150H	Advances in Electroanalytical Chemistry and Electrochemical Sensors
CHM1190Y	Analytical Chemistry Seminar
CHM1410H	Analytical Environmental Chemistry
CHM2013H	Research in Analytical Chemistry
CHM2014H	Research in Analytical Chemistry

Environmental Chemistry

Course Code	Course Title
CHM1401H	Transport and Fate of Chemical Species in the Environment
CHM1404H	Molecular Analysis of Natural Systems
CHM1410H	Analytical Environmental Chemistry
CHM1415H	Atmospheric Chemistry
CHM1420H	Environmental Chemistry of Soil
CHM1425H	Modelling the Fate of Organic Chemicals in the Environment
CHM1430H	Advanced Topics in Atmospheric Chemistry
CHM1590H	Environmental Chemistry Seminar
CHM1590Y	Environmental Chemistry Seminar
CHM2534H	Research in Environmental Chemistry
EES1105H	Soil Contamination Chemistry

Inorganic Chemistry

Course Code	Course Title
CHM1204H	Organometallic Chemistry and Catalysis
CHM1205H	Inorganic Reaction Mechanisms
CHM1206H	Solid State Chemistry: Structure-Property Relations
CHM1258H	Reactions of Coordinated Ligands
CHM1263H	Bio-inorganic Chemistry
CHM1268H	X-Ray Crystallography
CHM1269H	Nanochemistry: A Chemistry Approach to Nanomaterials
CHM1270H	Frontiers in Inorganic Chemistry (core course)
CHM1290H	Inorganic Chemistry Seminar
CHM1290Y	Inorganic Chemistry Seminar
CHM2034H	Research in Inorganic Chemistry

Organic and Biological Chemistry

Course Code	Course Title
CHM1003H	Physical Organic Chemistry II
CHM1004H	Synthetic Organic Chemistry
CHM1005H	Applications of Spectroscopy in Organic Structure Determination
CHM1006H	Bioorganic Chemistry
CHM1008H	Biological Chemistry
CHM1040H	Modern Organic Synthesis
CHM1045H	Modern Physical Organic Chemistry

Course Code	Course Title
CHM1054H	Topics in Bio-organic Chemistry
CHM1056H	Techniques for Studying the Chemical, Structural, and Dynamic Properties of Biomolecules
CHM1057H	Topics in Synthetic Organic Chemistry
CHM1060H	Advanced Topics in Synthetic Organic Chemistry
CHM1090Y	Organic Chemistry Seminar
CHM2044H	Research in Organic Chemistry
CHM2102H	Molecular Imaging in Diagnostic Medicine
CHM2103H	Chemical Glycobiology
CHM2104H	Biological Chemistry: Design and Evolution of Proteins and Nucleic Acids
CHM2105H	Medicinal Chemistry from the Enzyme's Perspective
CHM2106H	Current Topics in Chemical Biology
CHM2107H	Optogenetics and Chemogenetics: Protein and Small Molecule Based Biomolecular Tools
CHM2108H	Kinetic Modelling in Chemistry and Biology

Physical and Theoretical Chemistry

Course Code	Course Title
CHM1441H	Mathematical Methods
CHM1443H	Intermediate Quantum Mechanics
CHM1444H	Advanced Topics in Chemical Physics
CHM1446H	Quantum Computation and Information Theory
CHM1448H	Modelling of Biochemical Systems
CHM1449H	Machine Learning and Physics Based View on Chemical Compound Space
CHM1450H	Nanoscale Characterization with Scan Probe Microscopy
CHM1455H	NMR Spectroscopy I: Basic Theory and Applications for Biological Chemists
CHM1464H	Topics in Statistical Mechanics
CHM1478H	Quantum Mechanics for Physical Chemists (core course)
CHM1480H	Basic Statistical Mechanics (core course)
CHM1481H	Reaction Kinetics and Dynamics
CHM1482H	Laser Spectroscopy and Photophysics (core course)
CHM1485H	Selected Topics in Chemical Physics
CHM1488H	Advanced Experimental Methods (core course)
CHM1490Y	Physical Chemistry Seminar
CHM2024H	Research in Physical Chemistry

Polymers and Materials Chemistry

Course Code	Course Title
CHM1206H	Solid State Chemistry: Structure-Property Relations
CHM1300H	Polymer Chemistry
CHM1301H	Organic and Inorganic Polymer Synthesis
CHM1302H	Physical Chemistry of Polymers
CHM1304H	Organic Materials Chemistry
CHM1390Y	Polymer and Materials Chemistry Seminar
CHM2302H	Research in Polymer and Materials Chemistry
CHM2303H	Research in Polymer and Materials Chemistry
CHM2304H	Research in Polymer and Materials Chemistry

Cinema Studies

Cinema Studies: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Cinema Studies

MA and PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Diaspora and Transnational Studies**
  - Cinema Studies, MA
- **Sexual Diversity Studies**
  - Cinema Studies, MA
- **Women and Gender Studies**
  - Cinema Studies, MA

Overview

The Cinema Studies Institute (CSI) comprises 18 full-time faculty, whose competencies and research emphases contribute to a curriculum that encompasses film and media history, theory, analysis, and cultural practices. Specializations include: early cinema, technology, sound studies, architecture and space, animal studies, film philosophy, media archaeology, aboriginal cinemas, national cinemas, animation, critical race theory, postcolonial and subaltern studies, gender, migration and diaspora, documentary, digital and expanded cinemas, avant-garde, and experimental film.

The facilities, both at Innis College and in the Media Commons at Robarts Library, are equipped with the latest technologies; include a lending library dedicated to film scholarship archival and restoration facilities; several seminar rooms; mid-sized classrooms; and a lecture and screening facility, the Innis Town Hall, seating 150 visitors and boasting 35 mm, 16 mm, and digibeta capabilities. Students benefit from both the peerless campus resources as well as those institutions associated with Toronto's wider film and media culture, including the Film Reference Library, TIFF, Bell Lightbox, a multitude of film festivals, and a highly differentiated media production and distribution landscape.

Past graduates of CSI now teach at universities across the continent and are also employed at film and media-related institutions ranging from the Toronto International Film Festival Group to the Pacific Film Archive, serving as respected executives, creators, and curators. The institute is committed to providing students with a rigorous, engaging, and memorable education. Equally important, the institute aims to introduce graduates to a close-knit academic community that shares a common goal: exploring the depth and breadth of film and media scholarship in an environment that stimulates thought and fosters collegiality.

Contact and Address

Web: www.cinema.utoronto.ca
Email: gradcinema.studies@utoronto.ca
Telephone: (416) 978-5809
Fax: (416) 946-0168

Cinema Studies Institute, University of Toronto
Innis College, 2 Sussex Avenue
Toronto, Ontario M5S 1J5 Canada

Cinema Studies: Graduate Faculty

Full Members

Ackerman, Alan - BA, MA, PhD
Ambros, Veronika - MA, PhD
Baumann, Shyon - BA, MA, PhD
Boler, Megan - BA, PhD
Brown, Elspeth - MA, PhD
Budde, Antje - PhD
Cahill, James - AB, MA, MA, PhD
Cazdyn, Eric - BA, MA, PhD
Columpar, Corinn - BA, PhD ***(Associate Director, Graduate Studies)***
Fenner, Angelica - BA, MA, PhD
Jagoe, Eva-Lynn - BA, MA, PhD
Jain, Kajri - PhD
Johnson, Stephen - BA, MA, PhD
Kaplan, Louis - AB, AM, DPhil
Keil, Charlie - BA, MA, PhD
Keilty, Patrick - BA, MLIS, PhD
Legge, Elizabeth M.M. - BA, BA, MA, PhD
Leonard, Garry - BA, MA, PhD
Lim, Bliss Cua - AB, DA
MacArthur, Julie - BA, MPH, PhD
Maurice, Alice - BA, DPhil
Meng, Yue - BA, MA, MA, PhD
Most, Andrea - BA, MA, PhD
Price, Brian - PhD
Ricco, John - BA, MA, PhD
Richmond, Scott - BA, PhD
Saljoughi, Sara - BA, MA, PhD
Sammond, Nicholas - BA, MA, PhD
Sutherland, Meghan - PhD
Tcheuyap, Alexie - BA, MA, PhD
Walcott, Rinaldo - BA, MA, PhD
Zambenedetti, Alberto - MA, PhD ***(Director)***

Members Emeriti

Armatage, Kay - BA, MA, PhD
Testa, Bart - BA, MA

Associate Members

Banning, Kass - MFA, MFA
Chan, Nadine - DA
Cho, Michelle - BA, MA, DPhil
Cramer, Lauren - AB, MA, DFA
Mandusic, Zdenko - BA, MA, PhD
Parker, Felan - AB, AM, DA
Sengupta, Rakesh - BA, MA, PhD
Story, Brett - BA, MSc, DA
Wijaya, Elizabeth - BA, MA, MA, PhD

Cinema Studies: Cinema Studies MA

The course-based, one-year MA program offers students the option, during their third term, of pursuing either a professional internship or a major research paper of roughly 40 to 50 pages written under the supervision of a faculty advisor elected by the student. Students have the option to concurrently enrol in one of the collaborative specializations at U of T, such as Sexual Diversity Studies, Women and Gender Studies, or Transnational and Diaspora Studies, which entails also registering for their specific core courses. The MA in Cinema Studies is a full-time program.

Master of Arts

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Cinema Studies Institute's additional admission requirements stated below.
- Successful completion of an appropriate four-year University of Toronto bachelor's degree, or its equivalent from a recognized university.
- Minimum B+ standing, demonstrated by an average grade in the final year, or over senior-level courses.
- Successful completion of a minimum of 6.0 full-course equivalents (FCEs) in cinema studies, or comparable program preparation.
- A letter of intent addressing the academic goals an applicant wishes to pursue in the program.
- Three letters of recommendation.
- Transcripts from all post-secondary institutions.
- An academic writing sample of no more than 3,000 words.

Completion Requirements

- The MA is a coursework-only program and therefore does not require a thesis.
- Students must successfully complete a total of **4.0 full-course equivalents (FCEs)** over the course of an academic year, normally extending from September until August, as follows:
  - 1.0 FCE mandatory core courses: CIN1101H *Theories and Practices of Cinema* and CIN1102H *Key Developments in Film History*.
  - 1.0 FCE devoted to either the writing of a major research paper (CIN1006Y) or pursuing an internship (CIN1007Y).
  - 2.0 FCEs may be completed in the following way:
    - from elective CIN courses chosen from rotating special topics courses, also under the CIN rubric, but possibly cross-listed with another department, depending on the instructor's departmental home.
    - from film-related courses offered by other units (non-CIN designator) but approved as relevant to the Cinema Studies master's program curriculum.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

Cinema Studies: Cinema Studies PhD

Launched in September 2013, the Doctor of Philosophy program in Cinema Studies addresses the changing role of moving image media within global culture. Past and present configurations of cinema are studied through a constellation of theoretical, textual, social, and historical rubrics. The core curricular offerings engage with debates and questions that persist within the scholarship while also examining how the field contends with emerging disciplinary issues and intermedial formats today and at earlier historical junctures. Throughout the program of study, the synthesis of history and theory, textual analysis, and cultural study is emphasized.

Doctor of Philosophy

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Cinema Studies Institute's additional admission requirements stated below.
- Letter of intent outlining the academic ambitions, including possible thesis topic, the applicant aims to pursue in the program.
- Three letters of recommendation.
- A writing sample.
- Transcripts from all post-secondary institutions.

Completion Requirements

- The student's program of study must be approved by the Cinema Studies Institute (CSI).
- **Coursework.** Students must successfully complete a total of **4.0 full-course equivalents (FCEs)** as follows:
  - 1.0 FCE required courses: CIN2100H *History and Historiography of Cinematic Media* and CIN2101H *Pressures on the Cinematic*. Students who have already taken these courses, or their equivalent, will be required to enrol in alternate course selections, with the Graduate Coordinator's approval.
  - 1.5 FCEs offered in cinema studies.

    - 1.0 FCE elective courses offered in cinema studies or by other graduate units and chosen in consultation with the student's faculty advisor.
    - 0.5 FCE: CIN2999H *Research Seminar in Cinema Studies*.
- All coursework is normally completed by December of Year 2 of study, except for CIN2999H which may extend beyond that date.
- Completion of **one Qualifying Examination**. Students generally undertake the Qualifying Examination after the completion of coursework in Year 2 of study.
    - The Qualifying Examination covers two special fields and has two components: a written examination and an oral examination. These exams are scheduled by the student's supervisor and committee members. Examinations are marked on a pass/fail basis. (Should the committee deem their work exceptional, students may pass with distinction.) Students are allowed two attempts to pass the written examination and two attempts to pass the oral examination.
- Students must have completed all requirements for the degree, exclusive of thesis research, by the end of Year 3 of study in order to remain in good academic standing and in order to achieve candidacy.
- Completion of a **PhD dissertation** based on original research conducted by the candidate on an approved topic in cinema studies. The dissertation proposal should be approved by the supervisor no later than May of Year 2 of PhD studies. Each student is required to meet at least annually with a supervisory committee, which includes the supervisor and two faculty members, to review academic progress, and to consult about future directions.
- The thesis must be presented within six years of first enrolment in the PhD program. Successful **defence at the SGS Doctoral Final Oral Examination**.

Mode of Delivery: In person
Program Length: 4 years full-time
Time Limit: 6 years full-time

Cinema Studies: Cinema Studies MA, PhD Courses

Not all elective courses are offered every year. The department should be consulted each session as to elective and non-CIN course offerings.

MA Core Courses

Course Code	Course Title
CIN1101H	Theories and Practices of Cinema
CIN1102H	Key Developments in Film History

Plus one of:

Course Code	Course Title
CIN1006Y	Major Research Paper in Cinema Studies
CIN1007Y	Internship in Cinema Studies

PhD Core Courses

Course Code	Course Title
CIN2100H	History and Historiography of Cinematic Media
CIN2101H	Pressures on the Cinematic
CIN2999H	Research Seminar in Cinema Studies

Elective Courses (Subject to Change)

Course Code	Course Title
CIN1005H	Special Studies in Cinema
CIN1008H	Independent Research and Reading in Cinema Studies
CIN1011H	Colour and the Moving Image
CIN1100H	The Textual Object
CIN1772H	The Politics of Non-Fiction Film
CIN3002H	Cinema and Nation
CIN3004H	Documentary and Non-fiction Media
CIN3006H	Media and Philosophy
CIN3008H	Topics in Film and Media History
CIN3010H	Topics in Film and Media Theory
CIN3101H	World Cinemas, Cinematic Worlds
CIN3103H	Queer Girls and Racial Others
CIN3105H	Topics in Film Aesthetics
CIN3107H	Topics in Politics of the Moving Image
CIN6153H	Race and Cinema
CIN6803H	Intertextuality in Feminist Cinema: The Counter-Cinematic Impulse
JFF1101H	The Art of Exploration: How to Think the World
JFF1102H	Animages/Animots/Animotions
JGF1733H	Autobiographical Documentary: History, Alterity, and Performativity

Civil and Mineral Engineering

Civil and Mineral Engineering: Introduction

Faculty Affiliation

Applied Science and Engineering

Degree Programs

Civil Engineering

MASc

- Emphasis:
  - Sustainable Energy

MEng

- Emphases:
  - Advanced Water Technologies;
  - Building Science;
  - Concrete;
  - Construction Management;
  - Data Analytics and Machine Learning;
  - Engineering and Globalization;
  - Entrepreneurship, Leadership, Innovation and Technology in Engineering (ELITE);
  - Environmental Engineering;
  - Forensic Engineering;
  - Geomechanics;
  - Structural Engineering;
  - Sustainable Energy;
  - Sustainable Urban Systems;
  - Transportation Engineering and Planning;
  - Waterpower

PhD

- Emphasis:
  - Sustainable Energy

Cities Engineering and Management

MEngCEM

Combined Degree Programs

- UTSC, Environmental Biology (Specialist), Honours BSc / Civil Engineering, MEng
- UTSC, Environmental Biology (Specialist Co-op), Honours BSc / Civil Engineering, MEng
- UTSC, Environmental Chemistry (Specialist), Honours BSc / Civil Engineering, MEng
- UTSC, Environmental Chemistry (Specialist Co-op), Honours BSc / Civil Engineering, MEng
- UTSC, Environmental Geoscience (Specialist), Honours BSc / Civil Engineering, MEng
- UTSC, Environmental Geoscience (Specialist Co-op), Honours BSc / Civil Engineering, MEng
- UTSC, Environmental Physics (Specialist), Honours BSc / Civil Engineering, MEng
- UTSC, Environmental Physics (Specialist Co-op), Honours BSc / Civil Engineering, MEng

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Engineering Education**
  - Civil Engineering, MASc, PhD
- **Environmental Studies**
  - Civil Engineering, MASc, MEng, MEngCEM, PhD
- **Psychology, Psychiatry and Engineering**
  - Civil Engineering, MASc, PhD

Overview

The research conducted in the Department of Civil and Mineral Engineering is addressing the need for innovative solutions to society's needs, from the deep underground to the world's tallest structures. The dedicated students, staff, and professors are pursuing exciting research ranging from nanoscale investigations into water contamination and concrete properties, to the large-scale tests of structures under full-scale simulated earthquakes, to development of real-time mass transit models to solve urban congestion. Research is informed by extensive collaboration and interaction with industry and government partners. Facilities and breadth of research expertise are among the best in the world, offering great opportunities for involvement in ground-breaking research.

The Department of Civil and Mineral Engineering is organized into five interdisciplinary research themes: Cities & Infrastructure; Complex Systems; Energy & Environment; Mining & Subsurface Systems; and Transformative Technologies. These themes encompass the traditional civil engineering areas of Structural Engineering; Transportation Engineering; Environmental Engineering; Building Engineering and Construction Management; and Mining and Geomechanics.

Contact and Address

Admission Inquiries

Web: civmin.utoronto.ca
Email: admissions.civmin@utoronto.ca
Telephone: (416) 978-3099
Fax: (416) 978-6813

Student Services Inquiries

General inquiries: info.civmin@utoronto.ca
Note: please direct all admission inquiries to admissions.civmin@utoronto.ca.
PhD and MASc programs (current students): Colleen Kelly
Email: civ.gradprograms@utoronto.ca
Telephone: (416) 978-5904

MEng and MEngCEM programs (current students): Alison Morley
Email: meng.civmin@utoronto.ca
Telephone: (416) 946-8028

Department of Civil and Mineral Engineering
University of Toronto
Galbraith Building 35 St. George Street, Room 116
Toronto, Ontario M5S 1A4 Canada

Civil and Mineral Engineering: Graduate Faculty

Full Members

Abdulhai, Baher - BEng, MEng, PhD, PEng
Andrews, Robert - BASc, MASc, PhD, PEng
Andrews, Susan - BSc, MSc, PhD
Azhari, Fae - BEng, PhD
Bentz, Evan - BASc, PhD, PEng
Christopoulos, Constantin - BE, MASc, PhD, PEng
Collins, Michael - BE, PhD, PEng
Diamond, Sara - MASc
Drake, Jennifer Anne Pauline - BEng, MASc, PhD, PEng
El-Diraby, Tamer - BSc, MSc, PhD, PEng
Esmaeili, Kamran - BSc, MSc, PhD
Gauvreau, Paul - BSc, MSc, PhD, PEng
Ghafghazi, Mason - BSc, MSc, PhD
Grabinsky, Murray - BASc, MASc, PhD, PEng
Grasselli, Giovanni - PhD, PEng
Hadjigeorgiou, John - DiplGeol, BASc, ME, DPhil, PEng
Haines, Sarah - PhD
Harrison, John Paul - BSc, MSc, PhD
Hatzopoulou, Marianne - BSc, MSc, PhD ***(Chair)***
Hofmann, Ronald - BEng, MASc, PhD, PEng
Hooton, R. Douglas - BASc, MASc, PhD, PEng
Karney, Bryan - BSc, MEng, PhD, PEng
Kennedy, Christopher - BEng, MASc, MBA, MEc, PhD, PEng
Kim, Daeho - DPhil
Kwon, Oh-Sung - BS, MS, MS, PhD, PEng
Lee, Seungjae - DrEng
MacLean, Heather L. - BASc, MASc, MBA, PhD, PEng
McCabe, Brenda - BSc, PhD, PEng
Mercan, Oya - BS, MS, PhD
Meyer, David - PhD, PhD, PhD
Miller, Eric - BASc, MASc, PhD
Mohammed Adam Abbaker Basheer, Mohammed - PhD
Nurul Habib, Khandker - MS, PhD, PEng
Ogunsanya, Ibrahim G. - DrEng
Packer, Jeffrey - BE, MSc, DSc, PhD, PEng
Panesar, Daman - BE, ME, PhD, PEng
Passeport, Elodie - MSc, MSc, PhD
Peterson, Karl - BS, MS, PhD, PEng
Posen, I. Daniel - BA, MSc, MRes, PhD
Pressnail, Kim - BASc, PhD, PEng
Rezaei Rad, Aryan - PhD
Roorda, Matthew - BEng, MASc, PhD, PEng
Saxe, Shoshanna - MSc, PhD
Shalaby, Amer - BSc, MASc, PhD, PEng
Sheikh, Shamim - BSE, MASc, PhD, PEng
Siegel, Jeffrey Alexander - BS, MS, PhD
Sleep, Brent - BSc, MASc, PhD, PEng
Vanderburg, Willem - BASc, MASc, PhD, PEng
Vecchio, Frank - BASc, MEng, PhD, PEng
Warren, Lesley Alice - BSc, PhD
Windisch, Marianne Touchie - BASc, PhD
Xia, Kaiwen - BASc, MS, PhD, PEng
Young, Paul - BSc, MSc, PhD, CEng

Members Emeriti

Bawden, William - BSc, MSc, PhD, PEng
Birkemoe, Peter - BS, MSc, PhD
Ganczarczyk, Jerzy - MSc, DSc, DrHab
Hauer, Ezra - BSc, MSc, PhD
Hurdle, Vanolin - BS, MEng, PhD
Mohanty, Bibhu - BSc, MA, MTech, PhD
Selby, Kenneth - BASc, MBA, PhD
Soberman, Richard - BSc, SM, PhD
Steuart, Gerald - BSc, MS, PhD
Timusk, John - BASc, MASc, PhD
Will, George - BASc, MASc

Associate Members

Berardi, Umberto - BE, MS, DE
Bergerson, Joule A. - BSc, MEng, MS, PhD
Berube, Pierre - BASc, MASc, PhD
Chow, Shiao Huey - PhD
Gruber, Stephan - DrRerNat
Hoornweg, Daniel - BSc, MSc, PhD
Karampinos, Stratos - DipIng, ME, DrEng
Krol, Magdalena - BSE, ME, PhD
Le-Tuan Pham, Anh - PhD
Lindsay, Matthew - BSc, DSc
McPherson, Madeleine - BASc, ME, PhD
Minet, Laura - DrEng
OBrien, Liam - PhD, DrEng
Pensini, Erica - DE
Rezazadeh Azar, Ehsan - PhD
Talesnick, Mark - DSc
Zhao, Qi - ME, DrEng

Civil and Mineral Engineering: Civil Engineering MASc

The **Master of Applied Science (MASc) program** includes a foundational base of graduate courses followed by a research thesis. Many research projects involve industrial partnerships and networking opportunities, project management experience, and collaboration with leading experts.

MASc Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Civil and Mineral Engineering's additional admission requirements stated below.
- A completed undergraduate degree equivalent to a four-year University of Toronto program with a minimum final-year grade point average (GPA) of a mid B (3.0 out of 4.0, or 75%).
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

- Each student, in consultation with a staff member at the beginning of the program, will establish the distribution of time between coursework and thesis or design project.
- **Coursework.** Students must successfully complete a minimum of **2.5 full-course equivalents (FCEs)** (five half courses).
- **Research thesis.**
- Students must participate in the non-credit seminar course JDE1000H *Ethics in Research* during their first or second session of registration.
- In addition to the core research area, students have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Civil Engineering MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Civil and Mineral Engineering: Civil Engineering MEng

The **Master of Engineering (MEng) program** is course based and intended to provide continuing and advanced education for recent graduates and civil engineers in professional practice. The program can be taken on a full-time, extended full-time, or part-time basis.

MEng Program (Full-Time and Part-Time Options)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Civil and Mineral Engineering's additional admission requirements stated below.
- A completed undergraduate degree equivalent to a four-year University of Toronto program with a minimum final-year grade point average (GPA) of a mid-B (3.0 out of 4.0 or 75%).
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

- **Coursework.** Students must complete **5.0 full-course equivalents (FCEs)** (10 half courses), of which up to two half courses (1.0 FCE) may be replaced by a research/design project: CIV1001H or CIV1002Y.
- Part-time students are limited to four half courses per year and two half courses per session. Students normally complete the requirements in nine sessions.
- Students have the option of completing an emphasis in Advanced Water Technologies; Building Science; Concrete; Construction Management; Data Analytics and Machine Learning; Engineering and Globalization; Entrepreneurship, Leadership, Innovation and Technology in Engineering (ELITE); Environmental Engineering; Forensic Engineering; Geomechanics; Structural Engineering; Sustainable Energy; Sustainable Urban Systems; or Transportation Engineering and Planning as part of their degree program. Please see details in the Civil Engineering Emphases section.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 9 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MEng Program (Extended Full-Time Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Civil and Mineral Engineering's additional admission requirements stated below.
- A completed undergraduate degree equivalent to a four-year University of Toronto program with a minimum final-year grade point average (GPA) of a mid-B (3.0 out of 4.0 or 75%).

- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

- **Coursework.** Students must complete **5.0 full-course equivalents (FCEs)** (10 half courses), of which up to two half courses (1.0 FCE) may be replaced by a research/design project: CIV1001H or CIV1002Y.
- Students typically complete the requirements in six sessions (two years) and take six half courses per year and three half courses per session.
- Students have the option of completing an emphasis in Advanced Water Technologies; Building Science; Concrete; Construction Management; Data Analytics and Machine Learning; Engineering and Globalization; Entrepreneurship, Leadership, Innovation and Technology in Engineering (ELITE); Environmental Engineering; Forensic Engineering; Geomechanics; Structural Engineering; Sustainable Energy; Sustainable Urban Systems; or Transportation Engineering and Planning as part of their degree program. Please see details in the Civil Engineering Emphases section.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Civil and Mineral Engineering: Civil Engineering PhD

The **Doctor of Philosophy (PhD) program** is designed for outstanding individuals interested in a rewarding career in fundamental or applied research. This program involves advanced courses and an intensive research program culminating in a thesis.

Applicants may enter the PhD program via one of three routes: 1) following completion of an appropriate master's degree in engineering, mathematics, physics, or chemistry; 2) transfer from the University of Toronto MASc or MEng program; 3) direct entry following completion of a bachelor's degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Civil and Mineral Engineering's additional admission requirements stated below.
- A completed undergraduate degree equivalent to a four-year University of Toronto program with a minimum final-year grade point average (GPA) of B+ (3.3 out of 4.0 or 78%), and successful completion of a master's degree with an overall average of at least B+ (or equivalent).
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Applicants must satisfy the department of the ability to undertake advanced research.

Completion Requirements

- **Students with an MASc degree** (or equivalent in the same area of study) must complete a minimum of **2.0 full-course equivalents (FCEs)** (four half courses).
- **Students with an MEng degree** must complete a minimum of **4.5 FCEs** (nine half courses). Up to 3.0 FCEs (six graduate half courses) may be used from the MEng program towards the PhD course requirements.
- **Comprehensive examination** after completing most of the coursework and preferably within one year after first enrolment in the PhD program. This examination consists of a four- to five-day take-home written examination, followed approximately a week later by an oral examination. The examination is administered by a Comprehensive Examination Committee created and supervised by the department's Graduate Studies Committee.
- **Residence.** Students normally must spend at least two academic years of their program on campus on a full-time basis.
- The academic program must be approved by the department's Graduate Studies Committee.
- Students must participate in the non-credit seminar course JDE1000H *Ethics in Research*.
- Students have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Civil and Mineral Engineering Emphases section.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- Very strong MASc and MEng students may apply to transfer to the PhD program with approval of the Associate Chair. Please contact the department for more information.

Completion Requirements

- Students enrolled in the MASc or MEng degree program who transfer to the PhD program must complete a

minimum of **4.5 full-course equivalents** (**FCEs)** (nine half courses). Courses taken during the master's program may be applied to the PhD program.
- **Comprehensive examination** after completing most of the coursework and preferably within one year after first enrolment in the PhD program. This examination consists of a four- to five-day take-home written examination, followed approximately a week later by an oral examination. The examination is administered by a Comprehensive Examination Committee created and supervised by the department's Graduate Studies Committee.
- **Residence.** Students normally must spend at least two academic years of their program on campus on a full-time basis.
- The academic program must be approved by the department's Graduate Studies Committee.
- Students must participate in the non-credit seminar course JDE1000H *Ethics in Research* during their first or second session of registration.
- Students have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Civil and Mineral Engineering Emphases section.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Civil and Mineral Engineering's additional admission requirements stated below.
- A completed undergraduate degree equivalent to a four-year University of Toronto program with a minimum final-year grade point average (GPA) of A– (3.7 out of 4.0 or 80%).
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Applicants must satisfy the department of the ability to undertake advanced research.

Completion Requirements

- **Coursework.** Students must successfully complete a minimum of **4.5 full-course equivalents** (**FCEs)** (nine half courses).
- **Comprehensive examination** after completing most of the coursework and preferably within one year after first enrolment in the PhD program. This examination consists of a four- to five-day take-home written examination, followed approximately a week later by an oral examination. The examination is administered by a Comprehensive Examination Committee created and supervised by the department's Graduate Studies Committee.
- **Residence.** Students normally must spend at least two academic years of their program on campus on a full-time basis.
- The academic program must be approved by the department's Graduate Studies Committee during the student's first session.
- Students must participate in the non-credit seminar course JDE1000H *Ethics in Research*.
- Students have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Civil and Mineral Engineering Emphases section.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Flexible-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Civil and Mineral Engineering's additional admission requirements stated below.
- A completed undergraduate degree equivalent to a four-year University of Toronto program with a minimum final-year grade point average (GPA) of B+ (3.3 out of 4.0 or 78%), and successful completion of a master's degree with an overall average of at least B+ (or equivalent).
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Applicants must satisfy the department of the ability to undertake advanced research.
- In addition, applicants must demonstrate that they are actively engaged in professional activities related to their proposed program of study.

Completion Requirements

- **Students with an MASc degree** (or equivalent in the same area of study) must complete a minimum of **2.0 full-course equivalents (FCEs)** (four half courses).
- **Students with an MEng degree** must complete a minimum of **4.5 FCEs** (nine half courses). Up to 3.0 FCEs (six graduate half courses) may be used from the MEng program towards the PhD course requirements.
- **Comprehensive examination** after completing most of the coursework and preferably within one year after first enrolment in the PhD program. This examination consists of a four- to five-day take-home written examination, followed approximately a week later by an oral examination. The examination is administered by a Comprehensive Examination Committee created and supervised by the department's Graduate Studies Committee.

- **Residence.** Students normally must spend at least two academic years of their program on campus on a full-time basis.
- The academic program must be approved by the department's Graduate Studies Committee.
- Students must participate in the non-credit seminar course JDE1000H *Ethics in Research*.
- Students have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Civil and Mineral Engineering Emphases section.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

Civil and Mineral Engineering: Cities Engineering and Management MEngCEM

Cities are the economic engines of the world. Highly skilled professionals, armed with both technical expertise and a fundamental understanding of the cross-disciplinary issues, are needed to help our cities tackle challenges to ensure the well-being of their inhabitants and economies. In the **Master of Engineering: Cities Engineering and Management (MEngCEM) program**, students prepare for rewarding careers in government and the private sector, addressing the critical issues and growing needs of urban centres.

To proactively respond to the changing needs of cities, the MEngCEM program offers students a practicum to apply what they have learned in the classroom.

The MEngCEM program can be completed through full-time studies over three continuous sessions or through an extended full-time (EFT) option over six sessions.

MEngCEM Program (Full-Time Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Civil Engineering's additional admission requirements stated below.
- A completed undergraduate degree equivalent to a four-year University of Toronto program with a minimum final-year grade point average (GPA) of mid-B (3.0 out of 4.0 or 75%). Competitive admission averages are typically near or above 80% (A–).
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Applicants with backgrounds in an applied science other than engineering may be admitted.
- Applicants must have one year of work experience before admission to the program.

Completion Requirements

- Students must successfully complete a total of **5.0 full-course equivalents (FCEs)** as follows:
  - 4.0 FCEs (eight half courses) consisting of
    - four core courses:
      - CEM1001H *The Challenges of Urban Policy-Making*
      - CEM1002H *Data Analytics and Cities*
      - CEM1003H *Infrastructure and Urban Prosperity*
      - CEM1004H *Cities as Complex Systems*
    - three infrastructure engineering electives in one of eight specialization areas: Cybersecurity; Communications Networks; Environmental Issues for Health Cities; Operations Research; Resilience of Critical Infrastructure; Sustainable Energy Systems; Transportation; Urban Structures. For a complete list of applicable courses, see the Civil and Mineral Engineering and Management MEngCEM Courses section below.
    - one technology management elective (see course listing below).
  - 1.0 FCE Practicum typically completed during the Summer of Year 1.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

MEngCEM Program (Extended Full-Time Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Civil Engineering's additional admission requirements stated below.
- A completed undergraduate degree equivalent to a four-year University of Toronto program with a minimum final-year grade point average (GPA) of mid-B (3.0 out of 4.0 or 75%). Competitive admission averages are typically near or above 80% (A–).
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Applicants with backgrounds in an applied science other than engineering may be admitted.
- Applicants must have one year of work experience before admission to the program.

Completion Requirements

- Students must successfully complete a total of **5.0 full-course equivalents (FCEs)** as follows:
  - 4.0 FCEs (eight half courses) consisting of

- four core courses:
  - CEM1001H *The Challenges of Urban Policy-Making*
  - CEM1002H *Data Analytics and Cities*
  - CEM1003H *Infrastructure and Urban Prosperity*
  - CEM1004H *Cities as Complex Systems*
- three infrastructure engineering electives in one of eight specialization areas: Cybersecurity; Communications Networks; Environmental Issues for Health Cities; Operations Research; Resilience of Critical Infrastructure; Sustainable Energy Systems; Transportation; Urban Structures. For a complete list of applicable courses, see the Civil and Mineral Engineering and Management MEngCEM Courses section below.
- one technology management elective (see course listing below).

- 1.0 FCE Practicum typically completed during the Summer of Year 2.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Civil and Mineral Engineering: Emphases

Advanced Water Technologies

Participating Programs:

- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete a total of **2.0 full-course equivalents (FCEs)** (four half courses).

Core Courses

Students must select at least one of the following (0.5 FCE):

- CHE1150H *Industrial Water Technology*
- CIV1308H *Physical and Chemical Treatment Processes*
- CIV1309H *Biological Treatment Processes*
- CIV1311H *Advanced and Sustainable Drinking Water Treatment*

Students may select an additional course (0.5 FCE) from the list above, **or** they must select one (0.5 FCE) of the following:

- CHE565H1 *Aqueous Process Engineering*
- CIV541H1 *Environmental Biotechnology*
- CIV550H1 *Water Resources Engineering*
- CIV1303H *Water Resources Systems Modeling*
- CIV1319H *Chemistry and Analysis of Water and Wastes*
- CIV1330H *Water, Sanitation, Hygiene, and Global Health*
- CIV1398H *New Topics in Civil and Mineral Engineering*
- CME500H1 *Fundamentals of Acid Rock Drainage*
- CME549H1 *Groundwater Flow and Contamination*.

Specialization Courses

Students must select the remaining balance of courses (1.0 FCE) from the following, or from any of the core courses listed above:

- CHE1213H *Corrosion*
- CHE1430H *Hydrometallurgy Theory and Practice*
- JCC1313H *Environmental Microbiology*
- JNC2503H *Environmental Pathways*.

Enrolment and Completion

Students should contact Alison Morley (meng.civmin@utoronto.ca) to declare their interest, so that they can be notified of water engineering-related events and extracurricular activities.

To receive acknowledgment of the emphasis on their transcript, it is the student's responsibility to declare completion of the emphasis to their home department's graduate program administrator at the same time that they are requesting convocation. The student may also reach out to meng.civmin@utoronto.ca to confirm the completion of the emphasis.

Building Science

Participating Programs:

- Civil Engineering MEng

MEng students must successfully complete at least **six half courses (3.0 full-course equivalents [FCEs])** with a combination of core and elective courses as detailed below. One or two of the optional courses may be a one-session (CIV1001H) or two-session (CIV1002Y) project (not listed below). Other courses may be considered but will require approval of the Building Science emphasis coordinator.

Core Courses (complete at least four):

CIV575H1 *Building Science*,
CIV576H1 *Sustainable Buildings*,
CIV578H1 *Design of Building Enclosures*,
CIV1282H *Case Studies in Building Science*,
CIV1320H *Indoor Air Quality*,
MIE507H1 *HVAC Fundamentals*.

Elective Courses (others can be approved by the emphasis coordinator):

CIV514H1, CIV536H1, CIV577H1, CIV1279H, CIV1299H, MIE515H1, MIE1240H.

Concrete

Participating Programs:

- Civil Engineering MEng

MEng students must successfully complete **six of the following technical courses (3.0 full-course equivalents [FCEs])**, one or two of which may be a one-session (CIV1001H) or two-session (CIV1002Y) project (not listed below). Other courses may be considered but will require approval of the Concrete emphasis coordinator.

CIV514H1, CIV517H1, CIV1201H, CIV1250H, CIV1252H, CIV1260H, CIV1262H, CIV1275H, CIV1504H.

Construction Management

Participating Programs:

- Civil Engineering MEng

MEng students must successfully complete **six of the following technical courses (3.0 full-course equivalents [FCEs])**, one or two of which may be a one-session (CIV1001H) or two-session (CIV1002Y) project (not listed below). Other courses may be considered but will require approval of the Construction Management emphasis coordinator.

APS1001H, APS1005H, APS1049H, APS1031H, CIV580H1, CIV1279H, CIV1281H, CIV1283H, CIV1284H, CIV1285H, CIV1289H, CIV1299H, CIV1307H, CIV1504H.

Data Analytics and Machine Learning

Participating Programs:

- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Electrical and Computer Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

To be admitted to the emphasis in Data Analytics and Machine Learning, MEng students must first successfully complete a **prerequisite course APS1070H (0.5 full-course equivalent [FCE])**.

Subsequently, to earn the emphasis, students must successfully complete **four additional half courses (2.0 FCEs)** from the list of core courses or elective courses. These must include at least one core course; the remaining courses must be selected from the list of elective courses.

Students must have completed the prerequisite course APS1070H before taking any of the core courses.

Prerequisite Course

APS1070H *Foundations of Data Analytics and Machine Learning*.

Core Courses

CHE1147H *Data Mining in Engineering*,
ECE1513H *Introduction to Machine Learning*,
MIE1624H *Introduction to Data Science and Analytics*,
MIE1626H *Data Science Methods and Statistical Learning*,
MSE1065H *Application of Artificial Intelligence in Materials Design*.

Elective Courses

APS502H1, APS1005H, APS1017H, APS1022H, APS1050H, APS1051H, APS1052H, APS1053H, APS1080H,
BME1570H,
CEM1002H,
CHE507H1, CHE1108H, CHE1148H, CHE1434H,
CIV1504H, CIV1506H, CIV1507H, CIV1532H, CIV1538H, CIV1599H,
ECE537H1, ECE1504H, ECE1505H, ECE1657H, ECE1779H, ECE1786H,
MIE562H1, MIE1077H, MIE1413H, MIE1501H, MIE1512H, MIE1513H, MIE1517H, MIE1520H, MIE1620H, MIE1621H, MIE1622H, MIE1623H, MIE1625H, MIE1628H, MIE1653H, MIE1666H, MIE1721H, MIE1727H, MIE1769H,
MSE1063H.

Engineering and Globalization

Participating Programs:

- Aerospace Science and Engineering MEng
- Biomedical Engineering MEng
- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Electrical and Computer Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete **four half courses (2.0 full-course equivalents [FCEs])** from the following lists, with at least two half courses (or one full course) taken from Group A.

Group A

APS510H1, APS530H1, APS1420H, JCR1000Y (full-year course).

Group B

APS1015H, APS1020H, APS1024H, CHL5700H, CIV1399H.

Note: Students who choose to pursue an MEng project in their home department that aligns with the Centre for Global Engineering (CGEN)'s disciplinary focus, as deemed by the CGEN Director, may count the project as one required Group B course.

Students who complete the requirements of the emphasis in Engineering and Globalization and wish to obtain a notation on their transcript should contact the Faculty Graduate Studies office.

Entrepreneurship, Leadership, Innovation and Technology in Engineering

Participating Programs:

- Aerospace Science and Engineering MEng
- Biomedical Engineering MEng
- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Electrical and Computer Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete **any four of the following courses (2.0 full-course equivalents [FCEs])**:

Leadership

TEP1010H, TEP1011H, TEP1026H, TEP1027H, TEP1029H, TEP1030H, TEP1501H, TEP1502H, TEP1601H.

Entrepreneurship and Innovation

APS511H1, APS1012H, APS1013H, APS1015H, APS1023H, APS1033H, APS1035H, APS1036H, APS1041H, APS1061H, APS1088H.

Finance and Management

AER1601H, APS500H1, APS502H1, APS1001H, APS1004H, APS1009H, APS1016H, APS1017H, APS1020H, APS1022H, APS1028H, APS1032H, APS1043H, APS1049H, APS1050H, APS1051H, APS1052H.

Engineering and Society

APS510H1, APS1018H, APS1024H, APS1025H, APS1031H, APS1034H, APS1090H, APS1101H, APS1420H.

Environmental Engineering

Participating Programs:

- Civil Engineering MEng

MEng students must successfully complete **six of the following technical courses (3.0 full-course equivalents [FCEs])**, one or two of which may be a one-session (CIV1001H) or two-session (CIV1002Y) project (not listed below). Other courses may be considered but will require approval of the Environmental Engineering emphasis coordinator.

CHE1134H, CHE1150H, CHE1180H, CHE1431H, CHE1432H, CHL5903H,
CIV541H1, CIV550H1, CIV577H1, CIV1303H, CIV1307H, CIV1308H, CIV1311H, CIV1319H, CIV1320H, CIV1399H, CME549H1,
ENV1001H, ENV1701H,
JCC1313H,
JNC2503H,
MIE1240H.

Forensic Engineering

Participating Programs:

- Biomedical Engineering MEng
- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete **four courses (one core course and three elective courses; 2.0 full-course equivalents [FCEs])**.

Core Course

MSE1031H *Forensic Engineering*.

Elective Courses

AER1604H,
APS1034H, APS1039H, APS1040H, APS1101H,
BME1480H, BME1800H, BME1801H, BME1802H,
CHE561H1, CHE568H1, CHE1213H, CHE1431H, CHE1432H, CHE1434H, CHE1436H,
CIV510H1, CIV518H1, CIV1163H, CIV1171H, CIV1174H, CIV1190H, CIV1201H, CIV1279H, CIV1282H, CIV1422H, CIV1429H,
JMB1050H,
JNC2503H,
MIE507H1, MIE533H1, MIE566H1, MIE1301H, MIE1303H, MIE1411H, MIE1414H, MIE1514H, MIE1616H, MIE1708H, MIE1714H, MIE1721H, MIE1727H, MIE1804H,
MSE1015H, MSE1016H, MSE1022H, MSE1032H, MSE1067H.

Geomechanics

Participating Programs:

- Civil Engineering MEng

MEng students must successfully complete **six of the following technical courses (3.0 full-course equivalents [FCEs])**, one or two of which may be a one-session (CIV1001H) or two-session (CIV1002Y) project (not listed below). Other courses may be considered but will require approval of the Geomechanics emphasis coordinator.

CIV523H1, CIV1404H, CIV1419H, CIV1420H, CIV1425H, CIV1429H, CIV1499H,
MIN540H1, MIN565H1.

Structural Engineering

Participating Programs:

- Civil Engineering MEng

MEng students must successfully complete **six of the following technical courses (3.0 full-course equivalents [FCEs])**, one or two of which may be a one-session (CIV1001H) or two-session (CIV1002Y) project (not listed below). Other courses may be considered but will require approval of the Structural Engineering emphasis coordinator.
CIV510H1, CIV514H1, CIV515H1, CIV517H1, CIV518H1, CIV519H1, CIV1163H, CIV1164H, CIV1167H, CIV1169H, CIV1171H, CIV1174H, CIV1175H, CIV1180H.

Sustainable Energy

Participating Programs:

- Aerospace Science and Engineering MASc
- Aerospace Science and Engineering MEng
- Aerospace Science and Engineering PhD
- Chemical Engineering and Applied Chemistry MASc
- Chemical Engineering and Applied Chemistry MEng
- Chemical Engineering and Applied Chemistry PhD
- Civil Engineering MASc
- Civil Engineering MEng
- Civil Engineering PhD
- Electrical and Computer Engineering MASc
- Electrical and Computer Engineering MEng
- Electrical and Computer Engineering PhD
- Mechanical and Industrial Engineering MASc
- Mechanical and Industrial Engineering MEng
- Mechanical and Industrial Engineering PhD
- Materials Science and Engineering MASc
- Materials Science and Engineering MEng
- Materials Science and Engineering PhD

MASc and PhD students must successfully complete:

- At least **three half courses (1.5 full-course equivalents [FCEs])** from either of the following lists below.
- A thesis towards their degree on a topic related to sustainable energy. Topics must be approved by the steering committee of the Institute of Sustainable Energy. Contact: emphasis@cpe.utoronto.ca.

MEng students must successfully complete:

- **Four half courses (2.0 FCEs)** from either of the following lists below, including at least one core course (0.5 FCE).

Core Courses

APS1032H *Introduction to Energy Project Management*,
MIE515H1 *Alternative Energy Systems*,
MIE1120H *Current Energy Infrastructure and Resources*.

Elective Courses

AER507H1, AER1304H, AER1315H, AER1415H,
CHE568H1, CHE1053H, CHE1118H, CHE1123H, CHE1142H, CHE1143H,
CIV575H1, CIV576H1, CIV577H1, CIV1303H, CIV1307H,
ECE1030H, ECE1055H, ECE1057H, ECE1059H, ECE1085H, ECE1086H, ECE1092H, ECE1094H, ECE1476H,
MIE516H1, MIE517H1, MIE1128H, MIE1129H, MIE1130H, MIE1132H, MIE1240H, MIE1241H, MIE1715H,
MSE1023H, MSE1028H, MSE1058H.

Contact

All students are asked to register with Climate Positive Energy (CPE) at emphasis@cpe.utoronto.ca, at the beginning of their studies, to receive information about energy-related activities and opportunities on campus. CPE also administers a number of awards and scholarships for which students may be eligible.

Sustainable Urban Systems

Participating Programs:

- Civil Engineering MEng

MEng students must successfully complete **six of the following technical courses (3.0 full-course equivalents [FCEs])**, one or two of which may be a one-session (CIV1001H) or two-session (CIV1002Y) project (not listed below). Other courses may be considered but will require approval of the Sustainable Urban Systems emphasis coordinator.

APS510H1, APS1024H, APS1025H,
CIV514H1, CIV516H1, CIV531H1, CIV575H1, CIV576H1, CIV577H1, CIV1201H, CIV1252H, CIV1280H, CIV1303H, CIV1307H, CIV1535H,
ECE1092H,
ENV1001H,
MIE515H1, MIE1120H, MIE1240H, MIE1715H.

Transportation Engineering and Planning

Participating Programs:

- Civil Engineering MEng

MEng students must successfully complete **six of the following technical courses (3.0 full-course equivalents [FCEs])**, one or two of which may be a one-session (CIV1001H) or two-session (CIV1002Y) project (not listed below). Other courses may be considered but will require approval of the Transportation Engineering and Planning emphasis coordinator.

CIV516H1, CIV531H1, CIV536H1, CIV1307H, CIV1506H, CIV1508H, CIV1532H, CIV1535H, CIV1536H, CIV1538H.

Waterpower

Participating Programs:

- Civil Engineering MEng
- Mechanical and Industrial Engineering MEng

MEng students must successfully complete **four half courses (2.0 full-course equivalents [FCEs]**, including one core course. The remaining coursework may be taken from the following lists.

Core Course

APS1410H *Waterpower Essentials*.

Group A (complete at least one)

APS1411H,
CIV550H1.

Group B (complete at least one)

AER1410H,
APS1024H, APS1032H,
CIV514H1, CIV523H1, CIV580H1, CIV1001H, CIV1163H, CIV1171H, CIV1252H, CIV1275H, CIV1279H, CIV1281H, CIV1303H, CIV1399H, CIV1420H,
ECE520H1, ECE1049H, ECE1059H, ECE1093H, ECE1094H,
ENV1001H, ENV1701H, ENV1703H,
MIE1201H, MIE1207H, MIE1210H, MIE1222H, MIE1241H.

Civil and Mineral Engineering: Civil Engineering MASc, MEng, PhD Courses

Not all courses are given every year. Some courses may require a prerequisite. Please consult the department.

General Interest

Course Code	Course Title
APS1012H	Managing Business Innovation and Transformational Change
APS1043H	Writing Your Own Patent Application
APS1070H	Foundations of Data Analytics and Machine Learning
APS1410H	Waterpower Essentials
APS1411H	Renewal of Waterpower Facilities
CIV1001H	MEng Project I
CIV1002Y	MEng Project II
CIV1099H	Special Studies in Civil Engineering
CIV1289H	The Business of Knowledge in Civil Engineering
CIV1322H	Quantitative Methods for Decision Making
CIV1504H	Applied Probability and Statistics for Civil Engineering
CIV1539H	Evaluation of Civil Engineering Systems
CIV1540H	Urban Operations Research

Building Engineering

Course Code	Course Title
CIV514H1	Concrete Technology
CIV536H1	Urban Activity, Air Pollution, and Health
CIV575H1	Studies in Building Science
CIV576H1	Sustainable Buildings
CIV577H1	Infrastructure for Sustainable Cities
CIV578H1	Design of Building Enclosures
CIV580H1	Engineering and Management of Large Projects
CIV1201H	Concrete Technology and Non-Destructive Testing Principles
CIV1231H	Indoor Air Quality — Moisture, Microbes, and Materials
CIV1240H	Building Performance Assessment
CIV1250H	Instrumentation Techniques in Concrete Technology
CIV1252H	Repair and Maintenance of Concrete Structures
CIV1260H	Chemistry of Cements and Concrete
CIV1262H	Microscopy Applied to Concrete and Geomaterials
CIV1275H	Construction Modeling Methods
CIV1278H	Pre-Project Planning and Constructability Analysis
CIV1279H	Construction Contract Documents

Course Code	Course Title
CIV1280H	Building Envelope Design
CIV1281H	Asset Management
CIV1282H	Case Studies in Building Science
CIV1283H	Advanced Asset Management: Quantitative Tools and Methods
CIV1285H	Building Information Modelling
CIV1296H	Special Studies in Civil and Mineral Engineering
CIV1297H	New Topics in Civil and Mineral Engineering
CIV1298H	New Topics in Civil and Mineral Engineering
CIV1299H	New Topics in Civil and Mineral Engineering

Environmental Engineering

Course Code	Course Title
CIV541H1	Environmental Biotechnology
CIV550H1	Water Resources Engineering
CIV1302H	Low Impact Development and Stormwater Systems
CIV1303H	Water Resources Systems Modelling
CIV1307H	Life Cycle Assessment of Engineering Activities
CIV1308H	Physical and Chemical Treatment Processes
CIV1309H	Biological Treatment Processes
CIV1311H	Advanced and Sustainable Drinking Water Treatment
CIV1319H	Chemistry and Analysis of Water and Wastes
CIV1320H	Indoor Air Quality
CIV1321H	Large Scale Infrastructure and Sustainability
CIV1323H	Pathways to Net-Zero Greenhouse Gas Emissions
CIV1330H	Water, Sanitation, Hygiene, and Global Health
CIV1396H	Special Studies in Civil and Mineral Engineering
CIV1397H	New Topics in Civil and Mineral Engineering
CIV1398H	New Topics in Civil and Mineral Engineering
CIV1399H	New Topics in Civil and Mineral Engineering
CME549H1	Groundwater Flow and Contamination

Geomechanics

Course Code	Course Title
CIV521H1	Rock Mechanics
CIV523H1	Geotechnical Design
CIV1404H	Material Fracture Dynamics: Experimental Methods
CIV1420H	Soil Properties and Behaviour
CIV1421H	Continuum Mechanics of Fluids and Solids
CIV1422H	Dynamic Response of Engineering Materials
CIV1425H	Continuum Mechanics and Modelling of Soil Behaviour
CIV1429H	Advanced Rock Engineering: Rock Engineering in Fractured Rock Masses
CIV1430H	Engineering Rock Mechanics
CIV1496H	Special Studies in Civil and Mineral Engineering
CIV1497H	New Topics in Civil and Mineral Engineering
CIV1499H	New Topics in Civil and Mineral Engineering
CME500H1	Fundamentals of Acid Rock Drainage
MIN511H1	Integrated Mine Waste Engineering
MIN540H1	Borehole Geophysics for Engineers and Geoscientists
MIN565H1	Design and Support of Underground Mine Excavations

Structural Engineering

Course Code	Course Title
CIV510H1	Solid Mechanics II
CIV514H1	Concrete Technology
CIV515H1	Introduction to Structural Dynamics
CIV517H1	Prestressed Concrete
CIV518H1	Behaviour and Design of Steel Structures
CIV519H1	Structural Analysis II
CIV1163H	Mechanics of Reinforced Concrete
CIV1164H	Bridge Engineering
CIV1167H	Advanced Structural Dynamics
CIV1169H	Advanced Topics in Building Design
CIV1171H	Earthquake Engineering and Seismic Design
CIV1174H	Finite Element Methods in Structural Mechanics

Course Code	Course Title
CIV1175H	Design of Tubular Steel Structures
CIV1180H	Advanced Modeling Methods for Seismic Performance Assessment of Structures
CIV1190H	Structures Under Blast and Impact
CIV1196H	Special Studies in Civil and Mineral Engineering
CIV1197H	New Topics in Civil and Mineral Engineering
CIV1198H	New Topics in Civil and Mineral Engineering
CIV1199H	New Topics in Civil and Mineral Engineering

Transportation Engineering and Planning

Course Code	Course Title
CIV516H1	Public Transit Operations and Planning
CIV531H1	Transport Planning
CIV1505H	Transportation Research Seminar
CIV1506H	Freight Transportation and ITS Applications
CIV1507H	Public Transport
CIV1508H	Airport Planning and Engineering
CIV1520H	Travel Survey Methods
CIV1532H	Fundamentals of ITS and Traffic Management
CIV1535H	Transportation and Development
CIV1536H	Modelling Transport Emissions
CIV1538H	Transportation Demand Analysis
CIV1596H	Special Studies in Civil and Mineral Engineering
CIV1597H	New Topics in Civil and Mineral Engineering
CIV1598H	New Topics in Civil and Mineral Engineering
CIV1599H	New Topics in Civil and Mineral Engineering

Civil and Mineral Engineering: Cities Engineering and Management MEngCEM Courses

Courses must be approved by the Program Director.

Core Courses

Course Code	Course Title
CEM1001H	The Challenges of Urban Policy-Making
CEM1002H	Empirical Study of Cities
CEM1003H	Infrastructure and Urban Prosperity
CEM1004H	Cities as Complex Systems
CEM1000Y	Cities Engineering and Management Practicum

Infrastructure Engineering Course Electives

Students must choose three courses in one of the following specialization areas: Cyber Security, Communications Networks, Environmental Issues for Healthy Cities, Operations Research, Resilience of Critical Infrastructure, Sustainable Energy Systems, Transportation, Urban Structures.

The course selection (subject to change) in each infrastructure engineering specialization area is:

Cybersecurity

Course Code	Course Title
ECE568H1	Computer Security
ECE1508H	Special Topics in Communications
ECE1518H	Seminar in Identity, Privacy, and Security
ECE1776H	Computer Security, Cryptography, and Privacy

Communications Networks

Course Code	Course Title
ECE1508H	Special Topics in Communications
ECE1524H	Service Provider Networks
ECE1541H	Communication Networks I
ECE1545H	Bridges and Routers Planning
ECE1548H	Advanced Network Architectures

Environmental Issues for Health Cities

Course Code	Course Title
CHE1433H	Air Dispersion Modelling
CIV1303H	Water Resources Systems Modelling
CIV1308H	Physical and Chemical Treatment Processes
CIV1309H	Biological Treatment Processes

Course Code	Course Title
CIV1311H	Advanced and Sustainable Drinking Water Treatment
CIV1330H	Water, Sanitation, Hygiene, and Global Health
CME549H1	Groundwater Flow and Contamination

Operations Research

Course Code	Course Title
MIE1603H	Integer Programming
MIE1616H	Research Topics in Healthcare Engineering
MIE1620H	Linear Programming and Network Flows
MIE1621H	Non-Linear Optimization
MIE1721H	Reliability
MIE1727H	Quality Assurance I

Resilience of Critical Infrastructure

Course Code	Course Title
APS1024H	Infrastructure Resilience Planning
APS1025H	Infrastructure Protection
APS1031H	Infrastructure Planning
URD1044H	Urban Design and Development
URD2041H	Business and Land Use Planning in Real Estate Development

Sustainable Energy Systems

Course Code	Course Title
APS510H1	Innovative Technologies and Organizations in Global Energy Systems
ECE1092H	Smart Grid Case Studies
MIE515H1	Alternative Energy Systems
MIE1120H	Current Energy Infrastructure and Resources
MIE1240H	Wind Power
MIE1715H	Life Cycle Engineering

Transportation

Course Code	Course Title
CIV516H1	Public Transit Operations and Planning
CIV531H1	Transport Planning
CIV1506H	Freight Transportation and ITS Applications
CIV1508H	Airport Planning and Engineering
CIV1532H	Fundamentals of ITS and Traffic Management
CIV1535H	Transportation and Development
CIV1538H	Transportation Demand Analysis
CIV1598H	Special Studies in Civil Engineering — Transportation: Urban Operations Research

Urban Structures

Course Code	Course Title
APS1024H	Infrastructure Resilience Planning
APS1025H	Infrastructure Protection
CIV576H1	Sustainable Buildings
CIV1164H	Bridge Engineering
CIV1167H	Advanced Structural Dynamics
CIV1169H	Advanced Topics in Building Design
CIV1252H	Repair and Maintenance of Concrete Structures

Technology Management Course Electives

The course list is subject to change.

Course Code	Course Title
APS1001H	Project Management
APS1005H	Operations Research for Engineering Management
APS1009H	Natural Resources Management
APS1012H	Managing Business Innovation and Transformational Change
APS1015H	Social Entrepreneurship
APS1016H	Financial Management for Engineers
APS1017H	Supply Chain Management and Logistics
APS1024H	Infrastructure Resilience Planning
APS1025H	Infrastructure Protection

Course Code	Course Title
APS1031H	Infrastructure Planning
APS1036H	Formative Experiential Entrepreneurial Learning (FEEL)
APS1037H	Infrastructure Engineering in Remote First Nation Communities in Ontario
APS1039H	Enterprise Risk Management
APS1040H	Quality Control for Engineering Management
APS1088H	Business Planning and Execution for Canadian Entrepreneurs
APS1090H	Risk Engineering
APS1202H	Engineering and Sustainable Development
CHE1435H	Fundamentals of Aerosol Physics and Chemistry
CIV1307H	Life Cycle Assessment and Sustainability of Engineering Activities
TEP1010H	Cognitive and Psychological Foundations of Effective Leadership

Classics

Classics: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Classics

MA

- Fields:
  - Ancient History and Material Culture;
  - Greek and Roman Literature and Culture

PhD

- Fields:
  - Ancient History and Material Culture;
  - Ancient Philosophy;
  - Greek and Roman Literature and Culture

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Ancient and Medieval Philosophy**
  - Classics, PhD
- **Book History and Print Culture**
  - Classics, MA, PhD
- **Jewish Studies**
  - Classics, MA, PhD
- **Mediterranean Archaeology**
  - Classics, PhD
- **Sexual Diversity Studies**
  - Classics, MA, PhD
- **Women and Gender Studies**
  - Classics, MA, PhD

Overview

The Department of Classics provides advanced training in the fields of Ancient Philosophy; Greek and Roman History and Material Culture; and Greek and Roman Literature. Note that the field names for the MA and PhD will change for the 2024-25 academic year. This calendar entry includes both information on the current Classics MA and PhD requirements as well as the requirements that will be in effect for the 2024-25 academic year.

Collaborative specializations, listed above, are available to students enrolled in the specified participating degree programs.

Information about admission, application procedures, and funding is available from the department.

Contact and Address

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Department of Classics, University of Toronto
125 Queen's Park
Toronto, Ontario M5S 2C7 Canada

Classics: Graduate Faculty

Full Members

Akrigg, Ben - BA, PhD
Barney, Rachel - BA, PhD
Bendlin, Andreas - PhD
Bernard, Seth - BA, PhD ***(Graduate Coordinator, Associate Chair)***
Blouin, Katherine - BA, MA, PhD, PhD
Boys-Stones, George - MA, MA, DPhil, LittD ***(Chair and Graduate Chair)***
Bruun, Christer - BA, MA, PhD
Burgess, Jonathan - BA, MA, PhD
Chrubasik, Boris - MA, PhD
Dewar, Michael - BA, MA, DPhil
Gunderson, Erik - BA, MA, PhD
Keith, Alison - BA, MA, PhD, FRSC
Lytle, Ephraim - BA, PhD
Magee, John - BA, MA, PhD
Murray, Sarah - PhD
Revermann, Martin - PhD
Welsh, Jarrett - BA, MA, PhD
Wilkinson, Kevin - MA, PhD
Wohl, Victoria - BA, MA, PhD

Members Emeriti

Barnes, Timothy - BA, MA, DPhil, FRSC
Beck, Roger - BA, MA, PhD
Grant, John - BA, MA, PhD
Irwin, Marjorie - BA, PhD, PhD
McDonough, Christopher - BA, MA, PhD
Rist, John - MA
Traill, John - BA, MA, PhD

Associate Members

Atkins, Carrie - BA, MA, PhD
King, Peter - BA, PhD
Yu, Kenneth - PhD

Classics: Classics MA

The Department of Classics offers a diverse program of graduate studies leading to the Masters of Arts (MA) degree. With one of the largest graduate faculty in North America, the department offers a combination of rigorous training and engagement with a range of diverse and innovative methodologies. The program offers the opportunity to pursue study in several fields of specialization within the broad ambit of Classical Studies. Visit the departmental website for descriptions of specific fields. The department also connects students to the rich resources that the University of Toronto has to offer graduate research, including Robarts Research Library, with digital and print holdings unrivalled in Canada and representing one of the finest collections for Classical Studies in North America.

Classics: Classics MA; Field: Ancient History and Material Culture

Applicants may be admitted to either the two-year MA program or the one-year advanced-standing option, depending on their level of preparation. At the time of application, students are encouraged to indicate their preference for one of the two fields offered: 1) Ancient History and Material Culture or 2) Greek and Roman Literature and Culture. The MA program may be taken on a part-time basis.

MA Program (Two-Year)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Classics' additional admission requirements stated below.
- Successful completion of an appropriate bachelor's program in classics or a related field, with at least a B+ average in the final year.
- The equivalent of three years of training in either Greek or Latin and demonstrated excellence in the study of Greek and Roman history and material culture is recommended.
- Students who are otherwise qualified but who lack the required amount of training in Greek and Latin or in ancient history and material culture should consult with the department about further preparation.

Completion Requirements

The two-year MA program consists of **6.0 full-course equivalents (FCEs)** selected in consultation with the Graduate Coordinator, which includes a 1.0 FCE **Graduate Research Paper** (CLA2000Y), and completion of the **sight translation examination**. Students normally complete 3.0 FCEs in Year 1 and 3.0 FCEs in Year 2.

- **Coursework.** Students must successfully complete a total of 6.0 FCEs as follows:
  - CLA2000Y *Graduate Research Paper* completed by May of Year 2 with a minimum grade of B. Progress is assessed at the end of the Fall session with an interim pass/fail mark. Each student is assigned to a faculty advisor for CLA2000Y and works independently on the preparation of a research paper (about 8,000 words long). The Graduate Research Paper is assessed by a committee of two faculty members, including the advisor.
  - CLA3020Y *Ancient History Methods Course*.
  - The remaining 4.0 FCEs are electives selected in consultation with the Graduate Coordinator as follows:
    - 0.5 FCE selected from GRK1000H or LAT1000H, or one or more CLA1300-series courses may be recommended for students with less language preparation. Placement in Greek and Latin courses is based upon an ungraded diagnostic exam taken upon entry.
    - 3.5 FCEs selected from the CLA1300-level series, CLA5000-level series, GRK/LAT1000, the GRK/LAT1800-level series, MAC1000H, or MAC2000H. Students may take courses from outside the department with the Graduate Coordinator's approval.
  - Students may, but are not required to, take the methodology courses outside their field.
- **Sight translation examination.** Completion in either Greek or Latin with a minimum grade of B–.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 9 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MA Program (One-Year Advanced-Standing Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Classics' additional admission requirements stated below.
- Successful completion of an appropriate bachelor's program in classics or a related field, with at least a B+ average in the final year.
- The equivalent of three years of training in either Greek or Latin and demonstrated excellence in the study of Greek and Roman history and material culture is recommended.
- Students who are otherwise qualified but who lack the required amount of training in Greek and Latin or in ancient history and material culture should consult with the department about further preparation.

Completion Requirements

The one-year MA program consists of **4.0 full-course equivalents (FCEs)** selected in consultation with the Graduate Coordinator, which includes a 1.0 FCE **Graduate Research Paper** (CLA2000Y), and completion of the **sight translation examination**.

- **Coursework.** Students must successfully complete a total of **4.0 FCEs** as follows:
  - CLA2000Y *Graduate Research Paper* completed by May with a minimum grade of B. Progress is assessed at the end of the Fall session with an interim pass/fail mark. Each student is assigned to a faculty advisor for CLA2000Y and works independently on the preparation of a research paper (about 8,000 words long). The Graduate Research Paper is assessed by a committee of two faculty members, including the advisor.
  - CLA3020Y *Ancient History Methods Course*.
  - The remaining 2.0 FCEs are electives selected in consultation with the Graduate Coordinator as follows:
    - 0.5 FCE selected from GRK1000H or LAT1000H, or one or more CLA1300-series courses may be recommended for students with less language preparation. Placement in Greek and Latin courses is based upon an ungraded diagnostic exam taken upon entry.
    - 1.5 FCEs selected from the CLA1300-level series, CLA5000-level series, GRK/LAT1000, the GRK/LAT1800-level series, MAC1000H, or MAC2000H. Students may take courses from outside the department with the Graduate Coordinator's approval.
  - Students may, but are not required to, take the methodology courses outside their field.
- **Sight translation examination.** Completion in either Greek or Latin with a minimum grade of B–.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 9 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Classics: Classics MA; Field: Greek and Roman Literature and Culture

Applicants may be admitted to either the two-year MA program or the one-year advanced-standing option, depending on their level of preparation. At the time of application, students are encouraged to indicate their preference for one of the three fields offered: 1) Ancient History and Material Culture or 2) Greek and Roman Literature and Culture. The MA program may be taken on a part-time basis.

MA Program (Two-Year)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Classics' additional admission requirements stated below.
- Successful completion of an appropriate bachelor's program in classics or a related field, with at least a B+ average in the final year.
- The equivalent of three years of training in either Greek or Latin and two years of training in the other language is recommended.
- Students who are otherwise qualified but who lack the required amount of training in Greek and should consult with the department about further preparation.

Completion Requirements

The two-year MA program consists of **6.0 full-course equivalents (FCEs)** selected in consultation with the Graduate Coordinator, which includes a 1.0 FCE **Graduate Research Paper** (CLA2000Y), and completion of the **sight translation examination**. Students normally complete 3.0 FCEs in Year 1 and 3.0 FCEs in Year 2.

- **Coursework.** Students must successfully complete a total of **6.0 FCEs** as follows:
  - CLA2000Y *Graduate Research Paper* completed by May of Year 2 with a minimum grade of B. Progress is assessed at the end of the Fall session with an interim pass/fail mark. Each student is assigned to a faculty advisor for CLA2000Y and works independently on the preparation of a research paper (about 8,000 words long). The Graduate Research Paper is assessed by a committee of two faculty members, including the advisor.
  - 1.0 FCE from the GRK1800-level series or LAT1800-level series. CLA500-level seminars may be substituted with permission of the Graduate Coordinator.
  - The remaining 4.0 FCEs are electives selected in consultation with the Graduate Coordinator as follows:
    - 0.5 FCE selected from GRK1000H or LAT1000H, or one or more CLA1300-series courses may be recommended for students with less language preparation.
    - 3.5 FCEs selected from the CLA1300-level series, CLA5000-level series, GRK/LAT1000, the GRK/LAT1800-level series, MAC1000H, or MAC2000H. Students may take courses from outside the department with the Graduate Coordinator's approval.
  - Students may, but are not required to, take the methodology courses outside their field.
- **Sight translation examination.** Completion in either Greek or Latin with a minimum grade of B–.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 3 years part-time
Time Limit: 3 years full-time; 6 years part-time

MA Program (One-Year Advanced-Standing Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Classics' additional admission requirements stated below.
- Successful completion of an appropriate bachelor's program in classics or a related field, with at least a B+ average in the final year.
- The equivalent of at least three and preferably four years of training in Greek and Latin is recommended.
- Students who are otherwise qualified but who lack the required amount of training in Greek and Latin should consult with the department about further preparation.

Completion Requirements

The one-year MA program consists of **4.0 full-course equivalents (FCEs)** selected in consultation with the Graduate Coordinator, which includes a 1.0 FCE **Graduate Research Paper** (CLA2000Y), and completion of the **sight translation examination**.

- **Coursework.** Students must successfully complete a total **4.0 FCEs** as follows:
  - CLA2000Y *Graduate Research Paper* (1.0 FCE) completed by May with a minimum grade of B. Progress is assessed at the end of the Fall session with an interim pass/fail mark. Each student is assigned to a faculty advisor for CLA2000Y and works independently on the preparation of a research paper (about 8,000 words long). The Graduate Research Paper is assessed by a committee of two faculty members, including the advisor.
  - 1.0 FCE from the GRK1800-level series or LAT1800-level series. CLA500-level seminars may be substituted with permission of the Graduate Coordinator.
  - The remaining 2.0 FCEs are electives selected in consultation with the Graduate Coordinator as follows:
    - 0.5 FCE selected from GRK1000H or LAT1000H, or one or more CLA1300-series courses may be recommended for students with less language preparation. Placement in Greek and Latin courses is based upon an ungraded diagnostic exam taken upon entry.
    - 1.5 FCEs selected from the CLA1300-level series, CLA5000-level series, GRK/LAT1000, the GRK/LAT1800-level series, MAC1000H, or MAC2000H. Students may take courses from outside the department with the Graduate Coordinator's approval.
  - Students may, but are not required to, take the methodology courses outside their field.
- **Sight translation examination.** Completion in either Greek or Latin with a minimum grade of B–.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 9 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Classics: Classics PhD

The Department of Classics offers a diverse program of graduate studies leading to the Doctor of Philosophy (PhD) degree. With one of the largest graduate faculty in North America, the department offers a combination of rigorous training and engagement with a range of diverse and innovative methodologies. The program offers the opportunity to pursue study in several fields of specialization within the broad ambit of Classical Studies. Visit the departmental website for descriptions of specific fields. The department also connects students to the rich resources that the University of Toronto has to offer graduate research, including Robarts Research Library, with digital and print holdings unrivalled in Canada and representing one of the finest collections for Classical Studies in North America. Several collaborative specializations are also offered, with close connections with other departments and programs across campus.

Classics: Classics PhD; Field: Ancient History and Material Culture

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Classics' additional admission requirements stated below.
- Applicants are considered for admission if they have successfully completed a master's program in classics with sufficient training for the field in which they are seeking admission.
- Students who have completed the MA program in Classics at the University of Toronto are required to have grades of at least B+ in all graded coursework and a grade of at least A– on the *Graduate Research Paper* CLA2000Y.

Completion Requirements

- **Coursework.** Successful completion of **3.0 full-course equivalents (FCEs)** with an A– average selected in consultation with the Graduate Coordinator. At the department's discretion, students who need additional language preparation may be required to take a selection of courses approved by the department during Year 1 before beginning to prepare for the qualifying examinations. Students will be notified of such additional requirements at the time of their offers of admission or early in their first session following the entrance diagnostic exam. The 3.0 FCEs will include:

    - CLA2000Y *Graduate Research Paper* to be completed by May of Year 1 with a grade of at least A–. Progress is assessed at the end of the Fall session by an interim pass/fail mark. Each student is assigned to a faculty advisor for CLA2000Y and works independently on the preparation of a research paper (about 8,000 words in length). The Graduate Research Paper is assessed by a committee of two faculty members, including the advisor. Students who have previously completed CLA2000Y, or an equivalent graduate research paper, will instead complete 1.0 elective FCE selected in consultation with the Graduate Coordinator.
    - CLA3020Y *Ancient History Methods Course*. Students who have previously completed CLA3020Y will instead complete 1.0 elective FCE selected in consultation with the Graduate Coordinator.
    - 1.0 elective FCE selected from the following recommended courses: CLA1300-level series, CLA5000-level series, GRK/LAT1800-level series, and MAC1000H or MAC2000H. Students may only take up to 1.0 FCE in courses from the CLA1300-level series unless approved by the Graduate Coordinator. Of the 1.0 elective FCE:
        - At least 0.5 FCE is taken from courses not offered by or cross-listed by the Department of Classics.
        - Students may, but are not required to, take the methodology courses outside their field as part of the elective courses selected.
        - GRK1000H and LAT1000H, or courses below the GRK/LAT1000-level, are not eligible to fulfil the elective requirements.
- **Qualifying exam.** Successful completion of both Greek and Latin qualifying exams. One of these exams must be passed by May of Year 2, and both must be passed by January of Year 3; passing the exams at an earlier stage is advisable. Both exams must be passed before the major field examination is attempted. Students in the Mediterranean Archaeology Collaborative Specialization (MACS) are required to complete on qualifying exam in *either* Greek *or* Latin. The second exam may be replaced either by a B+ in a GRK/LAT1800-level series in an approved second language or by a passing grade on the sight translation exam in that language.
- **Sight translation examinations.** Successful completion in either Greek or Latin with a passing grade by May of Year 2. Students in the Mediterranean Archaeology Collaborative Specialization (MACS) are not required to complete sight translation examinations except as a way of fulfilling the requirement for their second qualifying exam.
- Demonstration of adequate **reading knowledge of two modern languages** of research other than English, one of which will normally be German, before the major field examination is attempted.
- Satisfactory completion of the **major field examination** (CLA4000Y). The major field defines a broad area of specialization, within which the dissertation topic will fall. It is normally established by Year 2 of the four-year PhD program and is directed by the supervisory committee. Preparation for the major field examination includes the completion of a satisfactory research essay. The major field is examined by means of two written examinations, one of which may involve translation from the list of primary sources, and an oral examination covering the research essay and the examination papers. The major field examination should be completed by the middle of Year 3 of the four-year PhD program.
- The **dissertation** should be completed by the end of Year 4.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Classics' additional admission requirements stated below.
- Successful completion of a bachelor's program in classics of a related field with at least an A– average in the final year and sufficient training for the field in which they are seeking admission.
- The equivalent of three years of training in either Greek or Latin, familiarity with the other language, and demonstrated excellence in the study of Greek and Roman history and material culture is required.

Completion Requirements

- **Coursework.** Successful completion of **6.0 full-course equivalents (FCEs)** with an A– average selected in consultation with the Graduate Coordinator. This includes:
    - CLA2000Y *Graduate Research Paper* to be completed by May of Year 1 with a grade of at least A–. Progress is assessed at the end of the Fall session by an interim pass/fail mark. Each student is assigned to a faculty advisor for CLA2000Y and works independently on the preparation of a research paper (about 8,000 words in length). The Graduate Research Paper is assessed by a committee of two faculty members, including the advisor.
    - CLA3020Y *Ancient History Methods Course*.
    - 4.0 elective FCEs selected from the following recommended courses: CLA1300-level series, CLA5000-level series, GRK/LAT1000-level series, GRK/LAT1800-level series, and MAC1000H or MAC2000H. Students may only take up to 1.0 FCE in courses from the CLA1300-level series unless approved by the Graduate Coordinator. Of the 4.0 elective FCEs:
        - At least 0.5 FCE is taken from courses not offered by or cross-listed by the Department of Classics.
        - Students may, but are not required to, take the methodology courses outside their field as part of the elective courses selected.

- **Qualifying exams.** Successful completion of both Greek and Latin qualifying exams. One of these exams must be passed by May of Year 2, and both must be passed by January of Year 3; passing the exams at an earlier stage is advisable. Both exams must be passed before the major field examination is attempted. Students in the Mediterranean Archaeology Collaborative Specialization (MACS) are required to complete the qualifying exam in *either* Greek *or* Latin. The second exam may be replaced either by a B+ in a GRK/LAT1800-level series in an approved second language or by a passing grade on the sight translation exam in that language.
- **Sight translation examinations.** Successful completion in either Greek or Latin with a passing grade by May of Year 2. Students in the Mediterranean Archaeology Collaborative Specialization (MACS) are not required to complete sight translation exams except as a way of fulfilling the requirement for their second qualifying exam.
- Demonstration of adequate **reading knowledge of two modern languages** of research other than English, one of which will normally be German, before the major field examination is attempted.
- Satisfactory completion of the **major field examination** (CLA4000Y). The major field defines a broad area of specialization, within which the dissertation topic will fall. It is normally established by Year 3 of the program and is directed by the supervisory committee. Preparation for the major field examination includes the completion of a satisfactory research essay. The major field is examined by means of two written examinations, one of which may involve translation from the list of primary sources, and an oral examination covering the research essay and the examination papers. The major field examination should be completed by the middle of Year 4.
- The **dissertation** should be completed by the end of Year 5.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Classics: Classics PhD; Field: Ancient Philosophy

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Classics' additional admission requirements stated below.
- Applicants are considered for admission if they have successfully completed a master's program in classics with sufficient training for the field in which they are seeking admission.
- Students who have completed the MA program in Classics at the University of Toronto are required to have grades of at least B+ in all graded coursework and a grade of at least A– on the *Graduate Research Paper* CLA2000Y.

Completion Requirements

- **Coursework.** Satisfactory completion of **3.0 full-course equivalents (FCEs)** with an A– average selected in consultation with the Graduate Coordinator. At the department's discretion, students who need additional language preparation may be required to take a selection of courses approved by the department during Year 1 before beginning to prepare for the qualifying examinations. Students will be notified of such additional requirements at the time of their offers of admission or early in their first session following the entrance diagnostic exam. The 3.0 FCEs will include:
  - CLA2000Y *Graduate Research Paper* to be completed by May of Year 1 with a grade of at least A–. Progress is assessed at the end of the Fall session by an interim pass/fail mark. Each student is assigned to a faculty advisor for CLA2000Y and works independently on the preparation of a research paper (about 8,000 words in length). The Graduate Research Paper is assessed by a committee of two faculty members, including the advisor. Students who have previously completed CLA2000Y, or an equivalent graduate research paper, will instead complete 1.0 elective FCE selected in consultation with the Graduate Coordinator.
  - AMP2000Y *Collaborative Specialization in Ancient and Medieval Philosophy (CSAMP) Proseminar*. Students who have previously completed AMP2000Y will instead complete 1.0 elective FCE selected in consultation with the Graduate Coordinator.
  - 1.0 elective FCE selected from the following recommended courses: CLA1300-level series, CLA5000-level series, GRK/LAT1800-level series, and MAC1000H or MAC2000H. Students may only take up to 1.0 FCE in courses from the CLA1300-level series unless approved by the Graduate Coordinator. Of the 1.0 elective FCE:
    - At least 0.5 FCE is taken from courses not offered by or cross-listed by the Department of Classics.
    - Students may, but are not required to, take the methodology courses outside their field as part of the elective courses selected.
    - GRK1000H and LAT1000H, or courses below the GRK/LAT1000-level, are not eligible to fulfil the elective requirements.
- **Qualifying exams.** Successful completion of both Greek and Latin qualifying exams. One of these exams must be passed by May of Year 2, and both must be passed by January of Year 3; passing the exams at an earlier stage is advisable. Both exams must be passed before the major field examination is attempted.
- **Sight translation examinations.** Successful completion of both Greek and Latin sight translation examinations. One of these exams must be passed by May of Year 2, and both must be passed before the major field examination is attempted.

- Demonstration of adequate **reading knowledge of two modern languages** of research other than English, one of which will normally be German, before the major field examination is attempted.
- Satisfactory completion of the **major field examination** (CLA4000Y). The major field defines a broad area of specialization, within which the dissertation topic will fall. It is normally established by Year 2 of the four-year PhD program and is directed by the supervisory committee. Preparation for the major field examination includes the completion of a satisfactory research essay. The major field is examined by means of two written examinations, one of which may involve translation from the list of primary sources, and an oral examination covering the research essay and the examination papers. The major field examination should be completed by the middle of Year 3 of the four-year PhD program.
- The **dissertation** should be completed by the end of Year 4.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Classics' additional admission requirements stated below.
- Successful completion of a bachelor's program in classics of a related field with at least an A– average in the final year.
- At least three years of study in both Greek and Latin and a broad preparation in the reading of ancient texts in the original languages is recommended.

Completion Requirements

- **Coursework.** Successful completion of **6.0 full-course equivalents (FCEs)** with an A– average selected in consultation with the Graduate Coordinator. This includes:
  - CLA2000Y *Graduate Research Paper* to be completed by May of Year 1 with a grade of at least A–. Progress is assessed at the end of the Fall session by an interim pass/fail mark. Each student is assigned to a faculty advisor for CLA2000Y and works independently on the preparation of a research paper (about 8,000 words in length). The Graduate Research Paper is assessed by a committee of two faculty members, including the advisor.
  - CLA3020Y *Ancient History Methods Course*.
  - 4.0 elective FCEs selected from the following recommended courses: CLA1300-level series, CLA5000-level series, GRK/LAT1000-level series, GRK/LAT1800-level series, and MAC1000H or MAC2000H. Students may only take up to 1.0 FCE in courses from the CLA1300-level series unless approved by the Graduate Coordinator. Of the 4.0 elective FCEs:
    - At least 0.5 FCE is taken from courses not offered by or cross-listed by the Department of Classics.
    - Students may, but are not required to, take the methodology courses outside their field as part of the elective courses selected.
- **Qualifying exams.** Successful completion of both Greek and Latin qualifying exams. One of these exams must be passed by May of Year 2, and both must be passed by January of Year 3; passing the exams at an earlier stage is advisable. Both exams must be passed before the major field examination is attempted.
- **Sight translation examinations.** Successful completion in either Greek or Latin with a passing grade by May of Year 2, and both must be passed before the major field examination is attempted.
- Demonstration of adequate **reading knowledge of two modern languages** of research other than English, one of which will normally be German, before the major field examination is attempted.
- Satisfactory completion of the **major field examination** (CLA4000Y). The major field defines a broad area of specialization, within which the dissertation topic will fall. It is normally established by Year 3 of the program and is directed by the supervisory committee. Preparation for the major field examination includes the completion of a satisfactory research essay. The major field is examined by means of two written examinations, one of which may involve translation from the list of primary sources, and an oral examination covering the research essay and the examination papers. The major field examination should be completed by the middle of Year 4.
- The **dissertation** should be completed by the end of Year 5.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Classics: Classics PhD; Field: Greek and Roman Literature and Culture

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Classics' additional admission requirements stated below.
- Applicants are considered for admission if they have successfully completed a master's program in classics with sufficient training for the field in which they are seeking admission.

- Students who have completed the MA program in Classics at the University of Toronto are required to have grades of at least B+ in all graded coursework and a grade of at least A– on the *Graduate Research Paper* CLA2000Y.

Completion Requirements

- **Coursework.** Successful completion of **3.0 full-course equivalents (FCEs)** with an A– average selected in consultation with the Graduate Coordinator. At the department's discretion, students who need additional language preparation may be required to take a selection of courses approved by the department during Year 1 before beginning to prepare for the qualifying examinations. Students will be notified of such additional requirements at the time of their offers of admission or early in their first session following the entrance diagnostic exam. The 3.0 FCEs will include:
  - CLA2000Y *Graduate Research Paper* to be completed by May of Year 1 with a grade of at least A–. Progress is assessed at the end of the Fall session by an interim pass/fail mark. Each student is assigned to a faculty advisor for CLA2000Y and works independently on the preparation of a research paper (about 8,000 words in length). The Graduate Research Paper is assessed by a committee of two faculty members, including the advisor. Students who have previously completed CLA2000Y, or an equivalent graduate research paper, will instead complete 1.0 elective FCE selected in consultation with the Graduate Coordinator.
  - 1.0 FCE from the GRK/LAT1800-series courses. Students may substitute with a CLA5000-level series course with permission of the Graduate Coordinator. Students who have previously completed these courses will instead complete 1.0 elective FCE selected in consultation with the Graduate Coordinator.
  - 1.0 elective FCE selected from the following recommended courses: CLA1300-level series, CLA5000-level series, GRK/LAT1800-level series, and MAC1000H or MAC2000H. Students may only take up to 1.0 FCE in courses from the CLA1300-level series unless approved by the Graduate Coordinator. Of the 1.0 elective FCE:
    - At least 0.5 FCE is taken from courses not offered by or cross-listed by the Department of Classics.
    - Students may, but are not required to, take the methodology courses outside their field as part of the elective courses selected.
    - GRK1000H and LAT1000H, or courses below the GRK/LAT1000-level, are not eligible to fulfil the elective requirements.
- **Qualifying exams.** Successful completion of both Greek and Latin qualifying exams. One of these exams must be passed by May of Year 2, and both must be passed by January of Year 3; passing the exams at an earlier stage is advisable. Both exams must be passed before the major field examination is attempted.
- **Sight translation examinations.** Successful completion of both Greek and Latin sight translation examinations. One of these exams must be passed by May of Year 2, and both must be passed before the major field examination is attempted.
- Demonstration of adequate **reading knowledge of two modern languages** of research other than English, one of which will normally be German, before the major field examination is attempted.
- Satisfactory completion of the **major field examination** (CLA4000Y). The major field defines a broad area of specialization, within which the dissertation topic will fall. It is normally established by Year 2 of the four-year PhD program and is directed by the supervisory committee. Preparation for the major field examination includes the completion of a satisfactory research essay. The major field is examined by means of two written examinations, one of which may involve translation from the list of primary sources, and an oral examination covering the research essay and the examination papers. The major field examination should be completed by the middle of Year 3 of the four-year PhD program.
- The **dissertation** should be completed by the end of Year 4.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Classics' additional admission requirements stated below.
- Successful completion of a bachelor's program in classics of a related field with at least an A– average in the final year.
- At least three years of study in both Greek and Latin and a broad preparation in the reading of ancient texts in the original languages is recommended.

Completion Requirements

- **Coursework.** Successful completion of **6.0 full-course equivalents (FCEs)** with an A– average selected in consultation with the Graduate Coordinator. This includes:
  - CLA2000Y *Graduate Research Paper* to be completed by May of Year 1 with a grade of at least A–. Progress is assessed at the end of the Fall session by an interim pass/fail mark. Each student is assigned to a faculty advisor for CLA2000Y and works independently on the preparation of a research paper (about 8,000 words in length). The Graduate Research Paper is assessed by a committee of two faculty members, including the advisor.
  - 1.0 FCE from the GRK/LAT1800-series courses. Students may substitute with a CLA5000-level series course with permission of the Graduate Coordinator.

    - 4.0 elective FCEs selected from the following recommended courses: CLA1300-level series, CLA5000-level series, GRK/LAT1000-level series, GRK/LAT1800-level series, and MAC1000H or MAC2000H. Students may only take up to 1.0 FCE in courses from the CLA1300-level series unless approved by the Graduate Coordinator. Of the 4.0 elective FCEs:
        - At least 0.5 FCE is taken from courses not offered by or cross-listed by the Department of Classics.
        - Students may, but are not required to, take the methodology courses outside their field as part of the elective courses selected.
- **Qualifying exams.** Successful completion of both Greek and Latin qualifying exams. One of these exams must be passed by May of Year 2, and both must be passed by January of Year 3; passing the exams at an earlier stage is advisable. Both exams must be passed before the major field examination is attempted.
- **Sight translation examinations.** Successful completion of both Greek and Latin sight translation examinations. One of these exams must be passed by May of Year 2, and both must be passed before the major field examination is attempted.
- Demonstration of adequate **reading knowledge of two modern languages** of research other than English, one of which will normally be German, before the major field examination is attempted.
- Satisfactory completion of the **major field examination** (CLA4000Y). The major field defines a broad area of specialization, within which the dissertation topic will fall. It is normally established by Year 3 of the program and is directed by the supervisory committee. Preparation for the major field examination includes the completion of a satisfactory research essay. The major field is examined by means of two written examinations, one of which may involve translation from the list of primary sources, and an oral examination covering the research essay and the examination papers. The major field examination should be completed by the middle of Year 4.
- The **dissertation** should be completed by the end of Year 5.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Classics: Classics MA, PhD Courses

Not all courses are offered every year. Please consult the department for course offerings.

Course Code	Course Title
AMP2000Y	Collaborative Specialization in Ancient and Medieval Philosophy (CSAMP) Proseminar
CLA2000Y	Graduate Research Paper
CLA3020Y	Ancient History Methods Course
CLA4000Y	Major Field
GRK1000H	Advanced Studies in Greek Language
GRK1800H	Special Topics in Greek Literature
GRK1810H	Classical Greek Literature and Culture
GRK1811H	Hellenistic Literature and Culture
GRK2505Y	Greek Sight Exam
JCO5121H	Classics and Theory
LAT1000H	Advanced Studies in Latin Language
LAT1800H	Special Topics in Latin Literature
LAT1806H	Readings in the Roman Historians
LAT1809H	Readings in Roman Republican Literature and Culture
LAT1810H	Readings in Roman Imperial Literature and Culture
LAT2505Y	Latin Sight Exam
SRD4444Y	Doctoral Seminar Series — Compulsory Attendance

Research Seminars

The following courses are open to students in other departments with the permission of the instructor and the Department of Classics. See the departmental brochure or website for language requirements. Not all courses are offered every year. See the departmental brochure or website for course offerings in the current year.

Course Code	Course Title
CLA5000H	Early Greek Epic
CLA5004H	Studies in Greek Poetry
CLA5007H	Criticism of Latin Poetry
CLA5009H	Literature of the Roman Republic
CLA5010H	Virgil
CLA5012H	Studies in Ancient Philosophy I
CLA5013H	Studies in Ancient Science
CLA5015H	Latin Poetry of the Empire
CLA5016H	Topics in Greek and Hellenistic History
CLA5018H	Topics in Roman History
CLA5021H	Topics in the Study of Greek and Hellenistic Literature and Culture
CLA5022H	Topics in the Study of Greek and Hellenistic Society

Course Code	Course Title
CLA5023H	Topics in the Study of Roman Literature and Culture
CLA5024H	Topics in the Study of Roman Society
CLA5025H	Topics in Greek and Hellenistic History II
CLA5026H	Topics in Graeco-Roman Historiography I
CLA5028H	Topics in Graeco-Roman History I
CLA5029H	Topics in Graeco-Roman History II
JMT1000H	Andronicus of Rhodes and the Early Peripatos
JMT1002H	Augustine: Soliloquia

Directed Reading

Course Code	Course Title
CLA1300Y	Studies in Classical Antiquity
CLA1301H	Studies in Classical Antiquity
CLA1303H	Studies in Classical Antiquity
CLA1305H	Studies in Classical Latin
CLA1306H	Studies in Greek Literature I
CLA1308H	Studies in Latin Literature I
CLA1309H	Studies in Latin Literature II

Comparative Literature

Comparative Literature: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Comparative Literature

MA and PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Book History and Print Culture**
  - Comparative Literature, MA, PhD
- **Diaspora and Transnational Studies**
  - Comparative Literature, MA, PhD
- **Jewish Studies**
  - Comparative Literature, MA, PhD
- **Sexual Diversity Studies**
  - Comparative Literature, MA, PhD
- **South Asian Studies**
  - Comparative Literature, MA, PhD
- **Women and Gender Studies**
  - Comparative Literature, MA, PhD

Overview

The Centre for Comparative Literature offers Master of Arts and Doctor of Philosophy degree programs to students qualified to pursue literary studies involving multiple languages. Students pursue research across languages and national literatures, engaging with theoretical issues that cross traditional disciplines. The centre's faculty and students work across linguistic boundaries, employing rigorous critical and theoretical lenses to bring into dialogue literature and other cultural forms that are often kept apart by artificially constructed institutional, geographical or ideological boundaries.

At the heart of the research by faculty and students is the close engagement with cultural products in their original languages. Knowledge of languages is a key component in our practice of Comparative Literature. Comparative Literature examines both the contexts of literature and the interaction among literatures. The practice of Comparative Literature at Toronto extends to visual expression as well, with film, photography or graphic novels figuring prominently in the projects of many faculty and students. Graduate programs at the Centre for Comparative Literature foster rigorous reading practices and theoretical reflection.

Interested applicants should consult the Centre's website. It provides updated information about course scheduling and academic profiles of graduate faculty.

Contact and Address

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University of Toronto, Isabel Bader Theatre
3rd Floor, 93 Charles Street West
Toronto, Ontario M5S 1K9 Canada

Comparative Literature: Graduate Faculty

Full Members

Bai, Ruoyun - BA, MA, PhD
Cazdyn, Eric - BA, MA, PhD
Comay, Rebecca - BA, MA, PhD
Dowling, Sarah - AB, AM, PhD ***(Associate Director)***
Esonwanne, Uzoma - BA, MA, PhD
Havercroft, Barbara - BA, MA, PhD
Jagoe, Eva-Lynn - BA, MA, PhD
James, Conrad - PhD
Kleber, Pia - BA, MA, MA, PhD
Komaromi, Ann - MA, DPhil ***(Director)***
Kortenaar, Neil ten - BA, MA, PhD
LeBlanc, Julie - BA, PhD
Ricco, John - BA, MA, PhD
Ross, Jill - BA, MA, PhD
Sakaki, Atsuko - BA, MA, PhD
Zilcosky, John - BA, MA, MA, PhD

Members Emeriti

Ambros, Veronika - MA, PhD
Hutcheon, Linda - BA, MA, PhD
Lahusen, Thomas - MA, PhD
Li, Victor - BA, MA, PhD
Rupp, Stephen - BA, MA, MA, MPH, PhD
Stock, Brian - AB, PhD

Associate Members

Budde, Antje - PhD
Clark, Caryl - BMus, MA, PhD
Eslava, Pedro Ordonez - BA, PhD
Esterhammer, Angela - BA, PhD
Goetschel, Willi - PhD
Gould, Rebecca Ruth - BA, PhD
Gunderson, Erik - BA, MA, PhD
Hewitt, Marsha - BA, MA, PhD
Holland, Kate - MA, PhD

Keith, Alison - BA, MA, PhD, FRSC
Leonard, Garry - BA, MA, PhD
Matus, Jill - BA, MA, PhD
Meng, Yue - BA, MA, MA, PhD
Motsch, Andreas - PhD
Ni Riordain, Cliona - BEd, MA, PhD
Noyes, John - BA, MA, PhD
Paterson, Janet - BA, MA, PhD
Revermann, Martin - PhD
Robins, William - BA, MPH, PhD
Somigli, Luca - PhD
Stern, Simon - BA, JD, PhD, Chair in Electronic Commerce
Trojanowska, Tamara - MA, PhD
Wohl, Victoria - BA, MA, PhD

Comparative Literature: Comparative Literature MA

The Comparative Literature MA program is a **course-based program** that accommodates a diverse range of students' interests. The interdisciplinary and transnational character of the program is reflected in the fact that students may take up to half their courses in other departments of their choice. Students work in languages other than English, and their study may include work in a non-literary discipline. The COL1000H *The Bases for Comparison* provides a basis for study in the program. All incoming students take this seminar course where they consider core theoretical problems of comparison.

All incoming students meet with the Associate Director to discuss their program and to decide on their course of study before beginning classes.

Master of Arts

Minimum Admission Requirements

- General Regulations of the School of Graduate Studies, provided that applicants also satisfy the Centre for Comparative Literature's requirements stated below. In all cases, programs of study must be approved by the Centre.
- An appropriate bachelor's degree from a recognized university that includes courses in literature and languages with an average grade equivalent to at least a University of Toronto B+ in the applicant's overall program.
- Demonstrated experience in the study of two literatures (or in comparative literature and one national literature) at the undergraduate level and an ability to work at the graduate level in at least one language other than English.
- All applicants must register as full-time students.

Completion Requirements

- Students admitted to the MA must successfully complete at least **4.0 full-course equivalents (FCEs)** including:
  - COL1000H *The Bases for Comparison*
  - at least 1.5 FCEs in COL courses.
- Students may pursue independent research for credit equivalent to 0.5 FCE at the MA level, under the direction of an advisor approved by the Centre for Comparative Literature.
- A plan of study is defined by each MA student through consultation with the Associate Director in light of the student's particular areas of interest and background. This plan of study is subject to the approval of the Centre for Comparative Literature. In addition to the numerous courses in literary theory, methodology, and interdisciplinary topics offered by the Centre, courses may also be selected from departments of language and literature, as well as from other units in the humanities.
- Average of at least B+ in coursework.
- MA students who intend to pursue doctoral studies are strongly advised to make appropriate plans for the acquisition of graduate level competence in a second language and literature other than English. An adequate reading knowledge of this second language must be demonstrated before the MA is received.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

Comparative Literature: Comparative Literature PhD

The Comparative Literature PhD program accommodates a diverse range of students' interests united by a shared concern for comparative issues. The interdisciplinary and transnational character of the program is reflected in the fact that students may take up to approximately half their courses in other departments of their choice. Students work in at least two languages other than English, and their study may include work in a non-literary discipline.

All incoming students meet with the Associate Director to discuss their program and to decide on their course of study before beginning classes.

The Centre for Comparative Literature only provides supervision in areas which fall within the competency, interests, or availability of its graduate faculty. The Centre supports research which engages creative practice with humanities-based theory and scholarship. Prospective students with an existing creative practice who are interested in using research creation methods are encouraged to contact the Associate Director to discuss the varieties of projects that can be supported. Fields of research creation may include, but are not limited to: architecture, design, creative writing, visual arts, performance, film, video, interdisciplinary arts, media and electronic arts, and new artistic practices (including experiments with the hard and social sciences). The Centre does not provide studio space or production facilities.

PhD Program

Minimum Admission Requirements

- General Regulations of the School of Graduate Studies, provided that applicants also satisfy the Centre for Comparative Literature's requirements stated below. In all cases, programs of study must be approved by the Centre.
- An appropriate master's degree with an average grade of at least A–. Normally, the master's degree will be in comparative literature; however, students with a master's degree in a humanities discipline involving literary studies, especially specific language and literature programs, will also be considered. Demonstrated ability to do advanced research in two languages and literatures other than English.
- Applicants, including those from the University of Toronto, must arrange for recommendations from two referees; must submit a statement of purpose of approximately 500 words; and must submit a sample of written work, preferably a short essay on a literary topic.
- The Centre welcomes applications from people with an established creative practice who would like to incorporate creative research methodologies into their dissertation work. Applicants who are interested in doing so must have the required expertise and resources to carry out the proposed creative work. Their letter of intent must 1) describe the type of creative research practice they intend to pursue so the Centre can determine whether it can provide appropriate supervisory and committee support. The applicant must 2) direct at least one reference letter writer to testify to the applicant's competency in the relevant creative practice, and the applicant must 3) articulate how the creative practice may be employed as a method for elucidating critical questions animating the dissertation project.

Completion Requirements

- A student with an **MA in Comparative Literature** or its equivalent must take at least **3.0 full-course equivalents (FCEs)**, of which a minimum of 2.0 FCEs must be COL courses. A student who has an **MA in a humanities discipline** involving literary studies, especially specific language and literature programs, may be required to take more courses. The actual number of courses required for the PhD will be established at the time of admission through consultation with the Director/Associate Director.
- Students may pursue independent research for credit equivalent to 0.5 FCE at the PhD level, under the direction of an advisor approved by the Centre.
- Students define the scope and approach of their **plan of study** in consultation with the Associate Director and other faculty. During the first two years of the program, students complete coursework, language requirements, and prepare for the field examination. Coursework must be completed within the first two years of the PhD program. Students constitute a field examination/supervisory committee and submit a dissertation proposal no later than the end of Year 2 of PhD study. The field examination is taken ideally no later than the end of the first session of Year 3.
- Students must demonstrate an ability to work at the graduate level in **two languages and literatures** other than English; students who are admitted with an established creative practice may substitute the second non-English language with their creative practice. An **adequate reading knowledge of a third language other than English** must be demonstrated before taking the field examination. For this last requirement, **students who have not** already substituted their creative practice for the second non-English language may substitute competency in a non-literary discipline. The Centre reserves the right to determine whether a student has met this requirement. Typically, it will be two graduate half courses in the non-literary discipline. These program requirements must be satisfied before taking the field examination. Certification of graduate-level competence and reading knowledge in languages is given to all students who qualify.
- All PhD students are required to take their **field examination** by the end of the Spring session of Year 3 of the program. The examination consists of both a field paper and an oral component.
  - The field paper is a 30-page critical essay based on the candidate's reading list that assesses the current state of research and delineates issues and questions pertinent to the thesis. The field paper must be submitted two to three weeks prior to the oral field exam.
  - The oral part of the examination begins with a textual explication by the student, no more than 30 minutes in length, of a specific passage or poem from a work in the primary reading list, assigned for preparation at least three days in advance. For the presentation, only notes or a general outline may be used. The rest of the examination usually consists of questions concerning the student's commentary on the text, the written field paper, the reading list of the original field proposal, and/or other aspects of the field. The oral exam lasts for two hours.
- In the event of failure, the student will be given one more chance to take the exam within one year. Failure after two attempts will lead to the termination of the student's registration.
- When the field examination has been completed successfully, the candidate will prepare and defend a **dissertation** which must be an original and significant contribution to the existing body of knowledge. This dissertation may include a creative research component.
- **Students' progress** will be assessed at least once a year by the Centre's Graduate Academic Committee and/or their respective supervisory committees. Although the program has been designed for completion in four years, some students may require a longer period to complete all of the requirements.
- The student must be **geographically available**, visit the campus regularly, and must register as a full-time student. In addition, a full-time student is not permitted to be absent from the University for an extended period or to participate in a program offered by another university without the explicit written permission of the Centre for Comparative Literature.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- General Regulations of the School of Graduate Studies, provided that applicants also satisfy the Centre for Comparative Literature's requirements stated below. In all cases, programs of study must be approved by the Centre.
- Students coming directly out of an appropriate undergraduate program (direct-entry) who have a demonstrated, exceptional ability to undertake advanced research in two languages and literatures other than English may be considered for direct admission into the PhD program.
- Applicants, including those from the University of Toronto, must arrange for recommendations from two referees; must submit a letter of intent not exceeding 500 words; and must submit a sample of written work, preferably a short essay on a literary topic.
- The Centre welcomes applications from people with an established creative practice who would like to incorporate creative research methodologies into their dissertation work. Applicants who are interested in doing so must have the required expertise and resources to carry out the proposed creative work. Their letter of intent must 1) describe the type of creative research practice they intend to pursue so the Centre can determine whether it can provide appropriate supervisory and committee support. The applicant must 2) direct at least one reference letter writer to testify to the applicant's competency in the relevant creative practice, and the applicant must 3) articulate how the creative practice may be employed as a method for elucidating critical questions animating the dissertation project.

Completion Requirements

- A student with a **bachelor's degree** who is admitted directly to the PhD program must take at least **6.0 full-course equivalents (FCEs)**, of which 3.0 must be COL courses. The actual number of courses required for the PhD will be established at the time of admission through consultation with the Director/Associate Director.
- Students may pursue independent research for credit equivalent to 0.5 FCE at the PhD level, under the direction of an advisor approved by the Centre.
- Students define the scope and approach of their **plan of study** in consultation with the Associate Director and other faculty. During the first two years of the program, students complete coursework, language requirements, and prepare for the field examination. Coursework must be completed within the first two years of the PhD program. Students constitute a field examination/supervisory committee and submit a dissertation proposal no later than the end of Year 2 of PhD study. The field examination is taken ideally no later than the end of the first session of Year 3.
- Students must demonstrate an ability to work at the graduate level in **two languages and literatures** other than English; students who are admitted with an established creative practice may substitute the second non-English language with their creative practice. An **adequate reading knowledge of a third language other than English** must be demonstrated before taking the field examination. For this last requirement, **students who have not** already substituted their creative practice for the second non-English language may substitute competency in a non-literary discipline. The Centre reserves the right to determine whether a student has met this requirement. Typically, it will be two graduate half courses in the non-literary discipline. These program requirements must be satisfied before taking the field examination. Certification of graduate-level competence and reading knowledge in languages is given to all students who qualify.
- All PhD students are required to take their **field examination** by the end of the Spring session of Year 3 of the program. The examination consists of both a field paper and an oral component.
  - The field paper is a 30-page critical essay based on the candidate's reading list that assesses the current state of research and delineates issues and questions pertinent to the thesis. The field paper must be submitted two to three weeks prior to the oral field exam.
  - The oral part of the examination begins with a textual explication by the student, no more than 30 minutes in length, of a specific passage or poem from a work in the primary reading list, assigned for preparation at least three days in advance. For the presentation, only notes or a general outline may be used. The rest of the examination usually consists of questions concerning the student's commentary on the text, the written field paper, the reading list of the original field proposal, and/or other aspects of the field. The oral exam lasts for two hours.
- In the event of failure, the student will be given one more chance to take the exam within one year. Failure after two attempts will lead to the termination of the student's registration.
- When the field examination has been completed successfully, the candidate will prepare and defend a **dissertation** which must be an original and significant contribution to the existing body of knowledge. This dissertation may include a creative research component.
- **Students' progress** will be assessed at least once a year by the Centre's Graduate Academic Committee and/or their respective supervisory committees.
- The student must be **geographically available**, visit the campus regularly, and must register as a full-time student. In addition, a full-time student is not permitted to be absent from the University for an extended period or to participate in a program offered by another university without the explicit written permission of the Centre for Comparative Literature.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Comparative Literature: Comparative Literature MA, PhD Courses

Students should consult the Comparative Literature website for the list of currently offered courses.

Course Code	Course Title
COL1000H	The Bases for Comparison
COL1900H	Reading and Research for the MA
COL2100H	Special Topics Course
COL4000Y	Practicum on Research and Bibliography in Comparative Literature
COL5016H	Dramatic Text and Theoretical Communication: Bertolt Brecht, Robert Lepage, and Robert Wilson
COL5018H	Gender and Agency
COL5032H	Feminist Approaches to Medieval Literature
COL5033H	Visual Portraitures in Contemporary Autobiographical Narratives
COL5047H	The Two Avant-Gardes
COL5081H	Benjamin's Arcades Project
COL5086H	Literature, Culture, and Contact in Medieval Iberia
COL5096H	The Problem of Translation: Historical, Theoretical, and Pragmatic Perspectives
COL5100H	The Late Barthes: The Neutral, Mourning, and Photography
COL5101H	Diasporic Cities: Itinerant Narratives of Metropoles by Travellers and Expatriates
COL5109H	Jean-Luc Nancy: Retreating the Aesthetic
COL5110H	Post-Capitalist Fantasy: Culture, Politics, Subjectivity
COL5111H	Revenge, Resistance, Race, and Law
COL5117H	Freud and Psychoanalysis
COL5122H	Text and Digital Media
COL5124H	Public Reading: Literature and the Formation of Critical Publics
COL5125H	Literature, Trauma, Modernity
COL5126H	Sports Narrated: Literary and Interdisciplinary Explorations
COL5127H	Queer Ethics and Aesthetics of Existence
COL5128H	Tragedy: Instantiations of a Dramatic Form in Theatre, Philosophy, Opera, and Popular Cinema
COL5129H	New Addictions for the Anthropocene
COL5131H	Non Disclosure Acts
COL5132H	One Philosopher and One Artist: Towards a New Practice of Comparison
COL5133H	Comparative Modernisms
COL5135H	Climate Genres
COL5136H	Aesthetics of Space, Place, and Power
COL5138H	Dramaturgy of the Dialectic
COL5139H	Critical Race Theory
COL5140H	Beckett and Philosophy
COL5141H	Beyond the Anthropocene: New Directions in Environmental Humanities
COL5143H	Dramaturgies of the Dialectic Part I: Hegel: The End of Art and the Endgame of Theater
COL5144H	Dramaturgies of the Dialectic Part II: Tragedy and Philosophy after Hegel
COL5145H	Poetics of Personhood
COL5142H	Women and Sex and Talk
COL5146H	Written in Blood: Caribbean Readings in Conflict and Healing
COL5147H	Books at Risk
COL5148H	Post-Conflict Literatures: Europe, Africa, and the Americas
COL5149H	The Art of Combat: Violence, Culture, and Competition
COL5150H	The Palliative: Art, Politics, Ecology, Medicine
COL5151H	The Theatre of Science
COL5153H	Lyric: Politics and Poetic Form
JCD5135H	Race, Politics, and Jewishness
JCD5136H	Migration and Memory: Narratives of Jewish Exile and Displacement
JCO5121H	Classics and Theory Seminar
JCY5116H	Freud: Case Histories
JFC1813H	Littérature de contact et pensée anthropologique en France du XVIe au XVIIIe siècle / Literature of Contact and Anthropological Thought, 16th–18th Century
JFC5025H	Feminism and Postmodernism: Theory and Practice
JFC5105H	Collections of Knowledge: Encyclopedism and Travel Literature in Early Modern Europe (1500–1800)

Course Code	Course Title
JFC5120H	The Gift / Le Don
JFC5129H	Performative Autobiographical Acts: Painted and Photographic Representations of Self in Personal and Political Testimonials
JFC5136H	Allegory and Allegorism in Literature and Fine Arts
JGC1855H	Critical Theory in Context: The French-German Connection
JHL1282H	Comparative Totalitarian Culture
JHL1680H	Revolutionary Women’s Cultures in East Asia, Early to Mid 20th Century
JLE5225H	The Passage from History to Fiction
JLV5134H	Theories of the Novel

Computer Science

Computer Science: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Applied Computing

MScAC (No Concentration)

MScAC Concentrations:

- Applied Mathematics;
- Artificial Intelligence;
- Artificial Intelligence in Healthcare;
- Data Science;
- Data Science for Biology;
- Quantum Computing

Computer Science

MSc and PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Environmental Studies**
  - Computer Science, MSc, PhD
- **Genome Biology and Bioinformatics**
  - Computer Science, PhD
- **Knowledge Media Design**
  - Computer Science, MSc, PhD
- **Neuroscience**
  - Computer Science, MSc, PhD
- **Robotics**
  - Computer Science, MSc, PhD

Overview

Graduate faculty in the Department of Computer Science are interested in a wide range of subjects related to computing, including programming languages and methodology, software engineering, operating systems, compilers, distributed computation, networks, numerical analysis and scientific computing, data structures, algorithm design and analysis, computational complexity, cryptography, combinatorics, graph theory, artificial intelligence, neural networks, knowledge representation, computational linguistics and natural language processing, computer vision, robotics, database systems, graphics, animation, interactive computing, and human-computer interaction.

For further details, consult the graduate student handbook prepared by the department and available online.

Contact and Address

MSc and PhD Programs

Web: cs.toronto.edu
Email: gradapplications.cs@utoronto.ca
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University of Toronto, Bahen Centre for Information Technology
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Toronto, Ontario M5S 2E4 Canada

MScAC Program

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Computer Science: Graduate Faculty

Full Members

Abdelrahman, Tarek - BSc, MSc, PhD
Aspuru-Guzik, Alan - PhD
Bader, Gary - BSc, PhD
Balakrishnan, Ravin - BS, SM, PhD
Barfoot, Tim - BASc, PhD
Becker, Christoph - BSc, MSc, DSc
Bonner, Anthony - BSc, MSc, PhD
Borodin, Allan - BS, SM, PhD, FAAAS
Brudno, Michael - AB, SM, PhD
Burgner-Kahrs, Jessica - PhD
Chechik, Marsha - BS, SM, PhD
Chignell, Mark - BSc, PhD
Christara, Christina - BS, SM, PhD
Dayan, Niv - PhD
de Lara, Eyal - BS, MS, PhD ***(Chair and Graduate Chair)***
Demke Brown, Angela - BS, SM, PhD
Dickinson, Sven Josef - BASc, MS, PhD
Duvenaud, David - PhD
Easterbrook, Steve - BSc, PhD
Ellen, Faith - BM, MMath, PhD ***(Associate Chair, Graduate Studies)***
Enright Jerger, Natalie - BSc, MSc, PhD
Fairgrieve, Thomas - BMath, MSc, PhD
Farahmand, Amir-massoud - PhD
Farzan, Azadeh - BS, PhD

Fidler, Sanja - PhD
Fleet, David James - BS, MS, PhD
Fox, Mark - BSc, PhD
Ganjali, Yashar - BSc, MSc, PhD
Garg, Animesh - BE, MS, MS, PhD
Gilitschenski, Igor - PhD
Goel, Ashvin - BTech, MS, PhD
Goldenberg, Anna - PhD, PhD
Gopalkrishnan, Rahul - PhD
Grinspun, Eitan - PhD
Grosse, Roger - PhD
Grossman, Tovi - PhD
Gruninger, Michael - BSc, MS, PhD
Guha, Shion - PhD
Gupta, Arvind - BSc, PhD
Hadzilacos, Vassos - BSE, PhD
Hirst, Graeme - BA, BSc, MSc, PhD
Jacobsen, Hans-Arno - MCS, PhD
Jacobson, Alec - PhD
Kahrs, Lueder Alexander - MSc, PhD
Khalvati, Farzad - MASc, PhD
Kim, Philip - BS, PhD
Kopparty, Swastik - BS, MS, PhD
Koudas, Nick - BS, MS, PhD
Kutulakos, Kyros - BS, MSc, PhD
Levin, David - PhD
Li, Baochun - BEng, MSc, DPhil
Lie, David - BASc, MS, PhD
Lindell, David - PhD
Long, Fan - PhD
Lyons, Kelly - BSc, MSc, PhD
Maddison, Christopher - PhD
Marbach, Peter Josef - DipIng, MS, PhD
McEwen, Rhonda - PhD
McIlraith, Sheila - BSc, MSc, PhD
Meel, Kuldeep Singh - PhD
Mehri Dehnavi, Maryam - PhD
Molloy, Michael - BMath, MMath, PhD
Morris, Quaid - BS, PhD
Moses, Alan - BA, PhD
Moshovos, Andreas - BSc, MS, PhD
Munteanu, Cosmin - MSc, MASc, PhD
Nikolov, Aleksandar - PhD
Nobre, Carolina - PhD
Papernot, Nicolas - BS, MSc, PhD
Pekhimenko, Gennady - BS, MS, PhD
Penn, Gerald - BS, MSc, PhD
Pitassi, Toniann - BS, SM, PhD
Raffel, Colin - PhD
Roy, Daniel - BS, MEng, PhD
Rudzicz, Frank - PhD
Sachdeva, Sushant - BTech, MA, PhD
Sanner, Scott - BCS, BCS, PhD
Saraf, Shubhangi - BS, MS, PhD
Schroeder, Bianca - MSc, PhD
Serkh, Kirill - BS, MS, PhD
Shah, Nisarg - PhD
Shkurti, Florian - BSc, MSc
Si, Xujie - PhD
Singh, Karan - BS, MS, PhD
Srinivasan, Akshayaram - BTech, PhD
Stevenson, Suzanne Ava - MS, PhD
Strug, Lisa - BS, BA, SM, PhD
Stumm, Michael - MS, PhD
Sun, Yu - BS, MS, MS, PhD
Taati, Babak - PhD
Tell, Roei - BA, MSc, PhD
Toueg, Sam - BS, MA, MSEE, PhD
Truong, Khai Nhut - BSc, PhD
Urtasun, Raquel - PhD
Veneris, Andreas - BSc, MSc, PhD
Wiebe, Nathan - PhD
Wigdor, Daniel - PhD
Xie, Ningning - PhD
Xu, Yang - PhD
Zemel, Richard - BA, SM, PhD
Zhou, Shurui - PhD

Members Emeriti

Baecker, Ronald M. - BS, SM, PhD
Corneil, Derek - BSc, MA, PhD
Enright, Wayne - BSc, MSc, PhD
Fiume, Eugene - BM, MSc, PhD
Hehner, Eric C.R. - BSc, MSc, PhD
Hinton, Geoffrey E. - BA, PhD
Jackson, Kenneth - BSc, MSc, PhD
Jepson, Allan - BSc, PhD
Levesque, Hector - BSc, MSc, PhD
Miller, Renee - BS, BM, MS, PhD
Mylopoulos, John - BE, MSc, PhD
Neal, Radford - BSc, MSc, PhD
Rackoff, Charles - SB, SM, PhD

Associate Members

Azhari, Fae - BEng, PhD
Badescu, Andrei - BSc, MSc, DPhil
Badr, Mario - PhD
Calver, Jonathan - PhD
Campbell, Jennifer - BSc, MMath
Campbell, Kieran - PhD
Cohen, Eldan - BSc, PhD
Craig, Michelle - BSc, MSc
Cunningham, William - BA, MA, MPH, MS, PhD
Engels, Steve - BASc, MMath
Gabel, Moshe - BSc, MSc, PhD
Ghassemi, Marzyeh - PhD
Gries, Paul - BA, MSc
Gronsbell, Jessica - BA, PhD
Horton, Diane - BS, MSc
Huang, Huaxiong - BSc, PhD
Kelly, Jonathan - BSc, MS, MSc, PhD
Kreinin, Alexander - MSc, PhD
Kuzminykh, Anastasia - PhD
Liang, Ben - BS, MS, PhD
Liu, David - MSc
Liut, Michael - BASc, MEng, PhD
Medland, Matthew - MSc
Petersen, Andrew - BS, BSc, MS, MSc, PhD
Pitt, Francois - BSc, MSc, PhD
Reid, Karen - BS, MB, MS
Reid, Nancy - BM, MSc, PhD, FRSC
Schwartz, Scott - BS, BA, PhD
Smith, Jacqueline - MSc
Stinchcombe, Adam - BMath, PhD
Tang, Tony - PhD
Waslander, Steven - BSE, MS, PhD
Zingaro, Daniel - BCS, MEd, MCS

Computer Science: Applied Computing MScAC

The Master of Science in Applied Computing (MScAC) program is offered as

- a general Computer Science program (**no concentration**) or as
- a **concentration in**:
  - Applied Mathematics, offered jointly by the Department of Computer Science and the Department of Mathematics;
  - Artificial Intelligence, offered jointly by the Department of Computer Science, the Department of Statistical Sciences, and the Faculty of Engineering and Applied Science;
  - Artificial Intelligence in Healthcare, offered jointly by the Department of Computer Science and the Temerty Faculty of Medicine;
  - Data Science, offered jointly by the Department of Computer Science and the Department of Statistical Sciences;
  - Data Science for Biology, offered jointly by the Department of Computer Science and the Department of Cell and Systems Biology;
  - Quantum Computing, offered jointly by the Department of Computer Science and the Department of Physics.

There is no thesis requirement.

MScAC General Program (No Concentration)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Computer Science's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university in computer science or a related discipline.
- A standing equivalent to at least B+ in the final year of undergraduate studies.
- Applicants whose primary language is not English and who have graduated from a university where the primary language of instruction is not English must submit results of the Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) with the following minimum scores:
  - Internet-based TOEFL: 93/120 and 22/30 on the writing and speaking sections.
  - IELTS: an overall score of 7.0, with at least 6.5 for each component.
- If students complete a portion of their degree in English, or part of their degree at another university where English is the language of instruction, applicants must still provide proof of English-language proficiency.
- Three letters of support from faculty and/or employers.
- Applicants will be asked to respond to program-specific questions addressing their interest in the concentration and objectives for the program.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **3.0 full-course equivalents (FCEs)** including:
  - 1.0 FCE in required courses: technical communications (CSC2701H) and technical entrepreneurship (CSC2702H).
  - Three graduate courses (1.5 FCEs) from the Department of Computer Science's approved list in two different course groups, including at most one course from group 2.
  - One additional graduate course (0.5 FCE), which cannot be from group 2.
- An eight-month industrial **internship**, CSC2703H. The internship is coordinated by the department and evaluated on a pass/fail basis.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F)
Time Limit: 3 years full-time

Computer Science: Applied Computing MScAC; Concentration: Applied Mathematics

MScAC Program (Applied Mathematics Concentration)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Computer Science's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university in a related area such as applied mathematics, computational mathematics, computer science, mathematics, physics, statistics, or any discipline where there is a significant mathematical component. The completed bachelor's degree must include coursework in advanced and multivariate calculus (preferably analysis), linear algebra, and probability. In addition, there should be some depth in at least two of the following six areas:
  - analysis (for example, measure and integration, harmonic analysis, functional analysis);
  - discrete math (for example, algebra, combinatorics, graph theory);
  - foundations (for example, complexity theory, set theory, logic, model theory);
  - geometry and topology;
  - numerical analysis; and
  - ordinary and partial differential equations.

There should also be a demonstrated capacity at programming and algorithms.
- A standing equivalent to at least B+ in the final year of undergraduate studies.
- Applicants must satisfy the admissions committee of their ability to be successful in graduate courses in computer science and mathematics, and in an industrial internship in applied mathematics. Applicants should be able to demonstrate a potential to conduct and communicate applied research at the intersection of computer science, mathematics, and a domain area. Applicants may be asked to do a technical interview as part of the application process.
- Applicants whose primary language is not English and who have graduated from a university where the primary language of instruction is not English must submit results of the Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) with the following minimum scores:
  - Internet-based TOEFL: 93/120 and 22/30 on the writing and speaking sections.
  - IELTS: an overall score of 7.0, with at least 6.5 for each component.
- If students complete a portion of their degree in English, or part of their degree at another university where English is the language of instruction, applicants must still provide proof of English-language proficiency.
- Three letters of reference from faculty and/or employers, with preference for at least one such letter from a faculty member in Mathematics or Applied Mathematics.
- Applicants will be asked to respond to program-specific questions addressing their interest in the concentration and objectives for the program.
- Applicants must indicate a preference for the concentration in Applied Mathematics in their application. Admission is competitive, and students who are admitted to the MScAC program are not automatically admitted to this concentration upon request.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **3.0 full-course equivalents (FCEs)** as follows:
  - 1.0 FCE in required courses:
    - CSC2701H *Communication for Computer Scientists*
    - CSC2702H *Technical Entrepreneurship*.
  - 1.0 FCE chosen from the MAT1000-level courses or higher.
  - 1.0 FCE chosen from the Computer Science (CSC course designator) graduate course listings in two different course groups.
  - Course selections should be made in consultation with the Program Director.
- An eight-month industrial **internship**, CSC2703H. The internship is coordinated by the department and evaluated on a pass/fail basis.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F)
Time Limit: 3 years full-time

Computer Science: Applied Computing MScAC; Concentration: Artificial Intelligence

MScAC Program (Artificial Intelligence Concentration)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Computer Science's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university in a related area such as physics, computer science, mathematics, statistics, engineering, or any discipline where there is a significant quantitative component. The completed bachelor's degree must include significant exposure to computer science or statistics or engineering including coursework in advanced and multivariate calculus (preferably analysis), linear algebra, probability and statistics, programming languages, and general computational methods.
- A standing equivalent to at least B+ in the final year of undergraduate studies.
- Applicants whose primary language is not English and who have graduated from a university where the primary language of instruction is not English must submit results of the Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) with the following minimum scores:
  - Internet-based TOEFL: 93/120 and 22/30 on the writing and speaking sections.
  - IELTS: an overall score of 7.0, with at least 6.5 for each component.
- If students complete a portion of their degree in English, or part of their degree at another university where English is the language of instruction, applicants must still provide proof of English-language proficiency.
- Three letters of reference from faculty and/or employers, with preference for at least one such letter from a faculty member in Artificial Intelligence (AI).
- Applicants will be asked to respond to program-specific questions addressing their interest in the concentration and objectives for the program.
- Applicants must indicate a preference for the concentration in AI in their application. Admission to the AI concentration is competitive. Students who are admitted to the MScAC program are not automatically admitted to the AI concentration upon request.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **3.0 full-course equivalents (FCEs)** as follows:
  - 1.0 FCE in required courses:
    - CSC2701H *Communication for Computer Scientists*
    - CSC2702H *Technical Entrepreneurship*
  - 1.5 FCEs of coursework in the area of AI:

        - 1.0 FCE selected from the core list of AI courses (see list below) from at least two different research areas
        - 0.5 FCE selected from additional AI courses outside the core list
    - Remaining 0.5 FCE of coursework will be chosen from outside of AI from course group 1, 3, or 4.
    - A maximum of 1.0 FCE may be chosen from outside the Computer Science (CSC course designator) graduate course listing.
- An eight-month industrial **internship**, CSC2703H. The internship is coordinated by the department and evaluated on a pass/fail basis.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F)
Time Limit: 3 years full-time

Computer Science: Applied Computing MScAC; Concentration: Artificial Intelligence in Healthcare

MScAC Program (Artificial Intelligence in Healthcare Concentration)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Computer Science's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university in an area such as life sciences, biochemistry, medical sciences, computer science, biotechnology, biostatistics, engineering, or a related discipline.
- A standing equivalent to at least B+ in the final year of undergraduate studies.
- Applicants should have sufficient academic undergraduate background in programming (ability to program and basic software engineering skills), calculus, statistics, a first- or second-year undergraduate course in statistics, linear algebra, and an undergraduate course that introduces concepts of healthcare and/or molecular biology. If courses were not taken prior to application to the program, please note that equivalent experience will be considered.
- Applicants must satisfy the admissions committee of their ability to be successful in graduate courses in artificial intelligence (AI) and an industrial internship in healthcare. Applicants may be asked to do a technical interview as part of the application process.
- The program will consider admitting candidates without an undergraduate degree in computer science, statistics, or a life sciences field, but who show a demonstrated aptitude to be an excellent candidate for this concentration. Applicants should be able to demonstrate a potential to conduct and communicate applied research at the intersection of computer science and a healthcare domain area. Background academic preparation to be successful in graduate-level computer science and medical sciences courses typically, though not always, includes intermediate or advanced undergraduate courses in the following topics:
    - Programming, software engineering, algorithms.
    - Statistical theory and/or mathematical statistics and linear algebra.
- Students who are otherwise qualified but lack the appropriate background may be granted conditional admission, pending successful completion of additional background material as judged by the admissions committee.
- Applicants whose primary language is not English and who have graduated from a university where the primary language of instruction is not English must submit results of the Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) with the following minimum scores:
    - Internet-based TOEFL: 93/120 and 22/30 on the writing and speaking sections.
    - IELTS: an overall score of 7.0, with at least 6.5 for each component.
- If students complete a portion of their degree in English, or part of their degree at another university where English is the language of instruction, applicants must still provide proof of English-language proficiency.
- Three letters of reference from faculty and/or employers, with preference for at least one such letter from a faculty member in computer science, biology, or data science.
- Applicants will be asked to respond to program-specific questions addressing their interest in the concentration and objectives for the program.
- Applicants must indicate a preference for the concentration in AI in Healthcare in their application. Admission to the AI in Healthcare concentration is competitive. Students who are admitted to the MScAC program are not automatically admitted to the AI in Healthcare concentration upon request.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **3.0 full-course equivalents (FCEs)** as follows:
    - 1.0 FCE in required courses:
        - CSC2701H *Communication for Computer Scientists*
        - CSC2702H *Technical Entrepreneurship*.
    - 0.5 FCE in approved data science courses.
    - 0.5 FCE in approved AI courses.
    - 0.5 FCE in approved group 3 courses (visualization/systems/software engineering courses).
    - 0.5 FCE in approved Laboratory Medicine and Pathobiology (LMP) or Master of Health Informatics (MHI) courses.
- A maximum of 1.0 FCE may be taken from outside the Department of Computer Science.
- Students who lack the academic background in AI and/or statistics may be required to take additional courses in these areas.
- An eight-month industrial **internship**, CSC2703H. The internship is coordinated by the department and evaluated on a pass/fail basis.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F)
Time Limit: 3 years full-time

Computer Science: Applied Computing MScAC; Concentration: Data Science

MScAC Program (Data Science Concentration)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Computer Science's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university in a related area such as statistics, computer science, mathematics, or any discipline where there is a significant quantitative component.
- A standing equivalent to at least B+ in the final year of undergraduate studies.
- Applicants must satisfy the admissions committee of their ability to be successful in graduate courses in computer science, statistics, and an industrial internship in data science. Applicants may be asked to do a technical interview as part of the application process.
- The program will consider admitting candidates without an undergraduate degree in computer science, statistics, or a related field, but who show a demonstrated aptitude to be an excellent data scientist. Applicants should be able to demonstrate a potential to conduct and communicate applied research at the intersection of computer science, statistics, and a domain area. Background academic preparation to be successful in graduate-level computer science and statistics courses typically, though not always, includes intermediate or advanced undergraduate courses in the following topics:
  - Algorithms and Complexity, Database Systems, or Operating Systems.
  - Statistical Theory/Mathematical Statistics, Probability Theory, or Regression Analysis.
- Students who are otherwise qualified but lack the appropriate background may be granted conditional admission, pending successful completion of additional background material as judged by the admissions committee.
- Applicants whose primary language is not English and who have graduated from a university where the primary language of instruction is not English must submit results of the Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) with the following minimum scores:
  - Internet-based TOEFL: 93/120 and 22/30 on the writing and speaking sections.
  - IELTS: an overall score of 7.0, with at least 6.5 for each component.
- If students complete a portion of their degree in English, or part of their degree at another university where English is the language of instruction, applicants must still provide proof of English-language proficiency.
- Three letters of support from faculty and/or employers.
- Applicants will be asked to respond to program-specific questions addressing their interest in the concentration and objectives for the program.
- Applicants must indicate a preference for the concentration in Data Science in their application. Admission is competitive, and students who are admitted to the MScAC program are not automatically admitted to this concentration upon request.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **3.0 full-course equivalents (FCEs)** including:
  - 1.0 FCE in required courses:
    - CSC2701H *Communication for Computer Scientists* and
    - CSC2702H *Technical Entrepreneurship*.
  - 1.0 FCE chosen from the STA2000-level courses or higher. This may include a maximum of 0.5 FCE chosen from the STA4500-level of six-week modular courses (0.25 FCE each).
  - 1.0 FCE chosen from the Computer Science (CSC course designator) graduate course listings in two different course groups.
  - Course selections should be made in consultation with the Program Director.
- An eight-month industrial **internship**, CSC2703H. The internship is coordinated by the department and evaluated on a pass/fail basis.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F)
Time Limit: 3 years full-time

Computer Science: Applied Computing MScAC; Concentration: Data Science for Biology

MScAC Program (Data Science for Biology Concentration)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Computer Science's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university in an area such as life sciences, biochemistry, medical sciences, computer science, biotechnology, biostatistics, engineering, or a related discipline.
- A standing equivalent to at least B+ in the final year of undergraduate studies.

- Applicants must satisfy the admissions committee of their ability to be successful in graduate courses in computer science, statistics, cell and systems biology, ecology and evolutionary biology, molecular genetics, and an industrial internship in biological data science. Applicants may be asked to do a technical interview as part of the application process.
- The program will consider admitting candidates without an undergraduate degree in computer science, statistics, or a related field, but who show a demonstrated aptitude to excel in this concentration. Applicants should demonstrate a potential to conduct and communicate applied research at the intersection of computer science, statistics, and cell biology. Students who are otherwise qualified but lack the appropriate background may be granted conditional admission, pending successful completion of additional background material as judged by the admissions committee.
- Applicants whose primary language is not English and who have graduated from a university where the primary language of instruction is not English must submit results of the Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) with the following minimum scores:
  - Internet-based TOEFL: 93/120 and 22/30 on the writing and speaking sections.
  - IELTS: an overall score of 7.0, with at least 6.5 for each component.
- If students complete a portion of their degree in English, or part of their degree at another university where English is the language of instruction, applicants must still provide proof of English-language proficiency.
- Three letters of support from faculty and/or employers, with preference for at least one such letter from a faculty member in biology or data science.
- Applicants will be asked to respond to program-specific questions addressing their interest in the concentration and objectives for the program.
- Applicants must indicate a preference for the concentration in Data Science for Biology in their application. Admission is competitive, and students who are admitted to the MScAC program are not automatically admitted to this concentration upon request.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **3.0 full-course equivalents (FCEs)** including:
  - 1.0 FCE in required courses:
    - CSC2701H *Communication for Computer Scientists*
    - CSC2702H *Technical Entrepreneurship*.
  - 1.0 FCE chosen from Cell and Systems Biology (CSB), Ecology and Evolutionary Biology (EEB), Molecular Genetics (MMG), or Statistical Sciences (STA) 1000-level or higher courses from the approved list below. A maximum of 0.5 FCE may be selected from EEB, MMG, and STA courses.
  - 1.0 FCE chosen from the Computer Science (CSC course designator) graduate course listings from two different course groups.
- Course selections should be made in consultation with the Program Director. Appropriate substitutions may be possible with approval.
- An eight-month industrial **internship**, CSC2703H. The internship is coordinated by the department and evaluated on a pass/fail basis.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F)
Time Limit: 3 years full-time

Computer Science: Applied Computing MScAC; Concentration: Quantum Computing

MScAC Program (Quantum Computing Concentration)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Computer Science's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university in a related area such as physics, computer science, mathematics, or any discipline where there is a significant quantitative component. The completed bachelor’s degree must include significant exposure to physics, computer science, and mathematics, including coursework in advanced quantum mechanics, multivariate calculus, linear algebra, probability and statistics, programming languages, and computational methods.
- A standing equivalent to at least B+ in the final year of undergraduate studies.
- Applicants whose primary language is not English and who have graduated from a university where the primary language of instruction is not English must submit results of the Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) with the following minimum scores:
  - Internet-based TOEFL: 93/120 and 22/30 on the writing and speaking sections.
  - IELTS: an overall score of 7.0, with at least 6.5 for each component.
- If students complete a portion of their degree in English, or part of their degree at another university where English is the language of instruction, applicants must still provide proof of English-language proficiency.
- Three letters of reference from faculty and/or employers, with preference for at least one such letter from a faculty member in Physics.
- Applicants will be asked to respond to program-specific questions addressing their interest in the concentration and objectives for the program.
- Applicants must indicate a preference for the concentration in Quantum Computing in their application. Admission is competitive, and students who are admitted to the MScAC program are not automatically admitted to this concentration upon request.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **3.0 full-course equivalents (FCEs)** as follows:
  - 1.0 FCE in required courses:
    - CSC2701H *Communication for Computer Scientists*
    - CSC2702H *Technical Entrepreneurship*.
  - 1.0 FCE chosen from the Physics (PHY course designator) graduate course listings. Of eligible courses, the following are examples that are particularly relevant to the Quantum Computing concentration:
    - PHY1500H *Statistical Mechanics*
    - PHY1520H *Quantum Mechanics*
    - PHY1610H *Scientific Computing for Physicists*
    - PHY2203H *Quantum Optics I*
    - PHY2204H *Quantum Optics II*
    - PHY2212H *Entanglement Physics*
  - 1.0 FCE chosen from the Computer Science (CSC course designator) graduate course listings from two different course groups. Of eligible courses, the following are examples that are particularly relevant to the Quantum Computing concentration:
    - CSC2305H *Numerical Methods for Optimization Problems*
    - CSC2421H *Topics in Algorithms*
    - CSC2451H *Quantum Computing, Foundations to Frontier*.
  - Course selections should be made in consultation with the Program Director. Appropriate substitutions may be possible with approval.
- An eight-month industrial **internship**, CSC2703H. The internship is coordinated by the department and evaluated on a pass/fail basis.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F)
Time Limit: 3 years full-time

Computer Science: Computer Science MSc

The Master of Science (MSc) degree program is designed for students seeking to be trained as a researcher capable of creating original, internationally recognized research in computer science.

The MSc program can be taken on a full-time or part-time basis.

MSc Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Computer Science's additional admission requirements stated below.
- An appropriate bachelor's degree with a standing equivalent to at least a University of Toronto B+. Preference is given to applicants who have studied computer science or a closely related discipline.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction is not English must achieve a Test of English as a Foreign Language (TOEFL) score of at least 580 on the paper-based test and 4 on the Test of Written English (TWE); 93/120 on the Internet-based test and 22/30 on the writing and speaking sections.

Completion Requirements

- **Coursework.** Students must successfully complete **2.0 graduate full-course equivalents (FCEs)** in computer science. Within this, at least 3 of their 4 courses (1.5 FCEs of 2.0 FCEs) must be from the approved list of courses and must be from at least two different course groups.
- A major research project (CSC4000Y) demonstrating the student's ability to do independent work in organizing existing concepts and in suggesting and developing new approaches to solving problems in a research area. The standard for this paper is that it could reasonably be submitted for peer-reviewed publication.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F); 8 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Computer Science: Computer Science PhD

The Doctor of Philosophy (PhD) degree program is designed for students seeking to be trained as a researcher capable of creating original, internationally recognized research in computer science. Research conducted under the supervision of a faculty member will constitute a significant and original contribution to computer science.

Applicants may enter the PhD program via one of two routes: 1) following completion of an appropriate master's degree or 2) direct entry following completion of a bachelor's degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Computer Science's additional admission requirements stated below.
- Successful completion of an appropriate master's degree with a standing equivalent to at least a University of Toronto B+. Preference is given to applicants who have studied computer science or a closely related discipline.

- Applicants whose primary language is not English and who graduated from a university where the language of instruction is not English must achieve a Test of English as a Foreign Language (TOEFL) score of at least 580 on the paper-based test and 4 on the Test of Written English (TWE); or 93/120 on the Internet-based test and 22/30 on the writing and speaking sections.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **2.0 full-course equivalents (FCEs)**. Together with graduate courses completed during the student's master's program, at least five courses must be from the approved list of courses and they must be from at least three different course groups. PhD students who did not complete their master's from the Department of Computer Science may, with the permission of the Associate Chair, Graduate Studies, have graduate courses they took during their master's be deemed equivalent to courses in the approved list. Students who completed their master's degree in a subject other than Computer Science may have to take additional courses to fulfil these requirements.
- **Presentation of a research project** in the first supervisory committee meeting, typically held within Year 1, and within four months of forming the supervisory committee. Students who completed their MSc within the Department of Computer Science will present the project they completed in CSC4000Y. Students who did not complete their MSc within the department will present an equivalent research project.
- **Qualifying oral examination**, typically held no later than two sessions after the first supervisory committee meeting. After the qualifying oral examination, the student's PhD supervisory committee must meet at least once annually.
- **Thesis topic**, which must be approved by the supervisory committee no later than one year after the successful completion of the qualifying oral examination.
- **Thesis.** Students must pass the departmental thesis examination before the SGS Final Oral Examination can be scheduled.

A timeline of milestones for satisfactory progress is outlined in the Department of Computer Science PhD handbook.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Computer Science's additional admission requirements stated below.
- Applicants may be admitted to this program directly from a bachelor's degree with a standing equivalent to at least a University of Toronto A–. Preference is given to applicants who have studied computer science or a closely related discipline.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction is not English must achieve a Test of English as a Foreign Language (TOEFL) score of at least 580 on the paper-based test and 4 on the Test of Written English (TWE); or 93/120 on the Internet-based test and 22/30 on the writing and speaking sections.

Completion Requirements

- Students must successfully complete a total of **4.0 full-course equivalents (FCEs)**. Within this, at least five of the eight courses (2.5 FCEs of 4.0 FCEs) must be from the approved list of courses and they must be from at least three different course groups.
- Complete **CSC4000Y** and a **presentation of the project completed** in that course at the first supervisory committee meeting, typically held by the first session of Year 2 (by the 16th month of the program).
- **Qualifying oral examination**, typically held in the first session of Year 3 (by the 28th month of the program). After the qualifying oral examination, the student's PhD supervisory committee must meet at least once annually.
- **Thesis topic**, which must be approved by the supervisory committee no later than one year after the successful completion of the qualifying oral examination.
- **Thesis.** Students must pass the departmental thesis examination before the SGS Final Oral Examination can be scheduled.

A timeline of milestones for satisfactory progress is outlined in the Department of Computer Science PhD handbook.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Computer Science: Computer Science MScAC, MSc, PhD Courses

Not all courses are offered every year. Please consult the department for course offerings.

MScAC Core Courses

Course Code	Course Title
CSC2701H	Communication for Computer Scientists
CSC2702H	Technical Entrepreneurship
CSC2703H	MScAC Internship

Research and Non-breadth Courses (all programs)

Course Code	Course Title
CSC1001H	Independent Research Project
CSC2600H	Topics in Computer Science
CSC2699H	Special Reading Course in Computer Science
CSC4000Y	Research Project in Computer Science

Group 1

Course Code	Course Title
CSC2221H	Introduction to the Theory of Distributed Computing
CSC2240H	Graphs, Matrices, and Optimization
CSC2332H	Introduction to Quantum Algorithms
CSC2401H	Introduction to Computational Complexity
CSC2404H	Computability and Logic
CSC2405H	Automata Theory
CSC2410H	Introduction to Graph Theory
CSC2412H	Algorithms for Private Data Analysis
CSC2414H	Advanced Topics in Complexity Theory
CSC2415H	Advanced Topics in the Theory of Distributed Computing
CSC2419H	Topics in Cryptography
CSC2420H	Algorithm Design, Analysis, and Theory
CSC2421H	Topics in Algorithms
CSC2426H	Fundamentals of Cryptography
CSC2427H	Topics in Graph Theory
CSC2429H	Topics in the Theory of Computation
CSC2451H	Quantum Computing, Foundations to Frontier
CSC2556H	Algorithms for Collective Decision Making

Group 2

Course Code	Course Title
CSC2417H	Algorithms for Genome Sequence Analysis
CSC2431H	Topics in Computational Biology and Medicine
CSC2501H	Computational Linguistics
CSC2502H	Knowledge Representation and Reasoning
CSC2503H	Foundations of Computer Vision
CSC2506H	Probabilistic Learning and Reasoning
CSC2511H	Natural Language Computing
CSC2512H	Advanced Propositional Reasoning
CSC2515H	Introduction to Machine Learning
CSC2516H	Neural Networks and Deep Learning
CSC2517H	Discrete Mathematical Models of Sentence Structure
CSC2518H	Spoken Language Processing
CSC2528H	Advanced Computational Linguistics
CSC2529H	Computational Imaging
CSC2530H	Computational Imaging and 3D Sensing
CSC2532H	Statistical Learning Theory
CSC2539H	Topics in Computer Vision
CSC2540H	Computational Cognitive Models of Language
CSC2541H	Topics in Machine Learning
CSC2542H	Topics in Knowledge Representation and Reasoning
CSC2545H	Advanced Topics in Machine Learning
CSC2546H	Computational Neuroscience
CSC2547H	Current Topics in Machine Learning
CSC2548H	Machine Learning in Computer Vision
CSC2559H	Trustworthy Machine Learning
CSC2606H	Introduction to Continuum Robotics
CSC2611H	Computational Models of Semantic Change
CSC2621H	Topics in Robotics
CSC2626H	Imitation Learning for Robotics
CSC2630H	Introduction to Mobile Robotics

Group 3

Course Code	Course Title
CSC2103H	Software Testing and Verification
CSC2104H	Formal Methods of Program Design
CSC2107H	Compilers and Interpreters
CSC2108H	Automated Reasoning with Machine Learning
CSC2125H	Topics in Software Engineering
CSC2126H	Topics in Programming Languages

Course Code	Course Title
CSC2130H	Empirical Research Methods in Software Engineering
CSC2206H	Computer Systems Modelling
CSC2208H	Advanced Operating Systems
CSC2209H	Computer Networks
CSC2210H	Visual and Mobile Computing Systems
CSC2222H	Applications of Parallel and Distributed Computing
CSC2224H	Parallel Computer Architecture and Programming
CSC2226H	Topics in Verification
CSC2227H	Topics in the Design and Implementation of Operating Systems
CSC2229H	Topics in Computer Networks
CSC2231H	Special Topics in Computer Systems
CSC2233H	Topics in Storage Systems
CSC2234H	Database System Technology
CSC2235H	Cloud-Native Data Management Systems
CSC2302H	Numerical Solutions of Initial Value Problems for Ordinary Differential Equations
CSC2305H	Numerical Methods for Optimization Problems
CSC2306H	High Performance Scientific Computing
CSC2310H	Computational Methods for Partial Differential Equations
CSC2321H	Matrix Calculations
CSC2508H	Advanced Data Systems
CSC2525H	Research Topics in Database Management

Group 4

Course Code	Course Title
CSC2504H	Computer Graphics
CSC2513H	Critical Thinking for Human Computer Interaction
CSC2514H	Human-Computer Interaction
CSC2520H	Geometry Processing
CSC2521H	Topics in Computer Graphics
CSC2523H	Object Modelling and Recognition
CSC2524H	Topics in Interactive Computing
CSC2526H	HCI: Topics in Ubiquitous Computing
CSC2527H	The Business of Software
CSC2536H	Topics in Computer Science and Education
CSC2537H	Information Visualization
CSC2549H	Physics-Based Animation
CSC2552H	Topics in Computational Social Science
CSC2557H	Adaptive Experimentation for Intelligent Interventions
CSC2558H	Topics in Multidisciplinary HCI
CSC2604H	Topics in Human-Centred and Interdisciplinary Computing
CSC2612H	Computing and Global Development
CSC2615H	Ethical Aspects of Artificial Intelligence
CSC2631H	Mobile and Digital Health
CSC2720H	Systems Thinking for Global Problems

Criminology and Sociolegal Studies

Criminology and Sociolegal Studies: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Criminology and Sociolegal Studies

MA and PhD

Combined Degree Programs

- STG, Law, Juris Doctor / Criminology and Sociolegal Studies, MA
- STG, Law, Juris Doctor / Criminology and Sociolegal Studies, PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Addiction Studies**
  - Criminology and Sociolegal Studies, MA, PhD
- **Diaspora and Transnational Studies**
  - Criminology and Sociolegal Studies, MA, PhD
- **Sexual Diversity Studies**
  - Criminology and Sociolegal Studies, MA, PhD
- **Women and Gender Studies**
  - Criminology and Sociolegal Studies, MA, PhD

Overview

The Centre for Criminology and Sociolegal Studies, founded in 1964, offers advanced interdisciplinary study in two closely related, overlapping areas: criminology and sociolegal studies.

MA graduates find employment in government (in areas such as child and youth services or addiction as well as criminal justice fields), in governmental organizations in the criminal justice field, in social science research, or in other positions for which a background in criminology and sociolegal studies is useful. Some choose to go to law school, and many have gone on to other post-graduate work, such as in criminology, sociology, law, and social work.

PhD graduates have mainly found employment in tenure-track positions, most often in sociology departments or in criminology programs. Both the MA and PhD degree programs are research-oriented and academic rather than professional/vocational.

Students enrolled in doctoral programs in other departments of the University of Toronto may apply to be appointed as Junior Fellows at the Centre for Criminology and Sociolegal Studies. The objective of the Junior Fellow Program is to involve doctoral students whose work overlaps with the research conducted at the Centre and to enhance the interdisciplinarity of the Centre. Junior Fellows have come from history, geography, law, and sociology. Exceptionally, doctoral students pursuing degrees at other universities but residing in Toronto may apply to be appointed as Visiting Junior Fellows.

Contact and Address

Web: www.crimsl.utoronto.ca
Email: crimsl.grad@utoronto.ca
Telephone: (416) 978-8679
Fax: (416) 978-4195

Centre for Criminology and Sociolegal Studies
University of Toronto
14 Queen's Park Crescent West
Toronto, Ontario M5S 3K9 Canada

Criminology and Sociolegal Studies: Graduate Faculty

Full Members

Chen, Li - BA, MA, AM, JD, PhD
Chiao, Vincent - BA, JD, PhD
Clarke, Kamari - BA, LLM, MA, MPH, PhD ***(Director)***
Dubber, Markus - AB, JD
Goodman, Philip - BA, MA, PhD
Hannah-Moffat, Kelly - BA, MA, PhD
Jauregui, Beatrice - BA, MA, PhD ***(Graduate Coordinator)***
Light, Matthew - BA, JD, MA, PhD
Macklin, Audrey - BSc, LLB, LLM
Maurutto, Paula - DPhil
Mitchell, Mary - BA, JD, MA, PhD
Owusu-Bempah, Akwasi - BA, MA, PhD
Phillips, James - LLB, MA, PhD
Roach, Kent - BA, LLB, LLM
Wortley, N. Scot - BA, MA, PhD

Members Emeriti

Friedland, Martin - BCom, LLB, PhD
Kruttschnitt, Candace - BA, MA, MPH, PhD
Valverde, Mariana - BA, MA, PhD, FRSC

Associate Members

Kosals, Leonid - PhD
Martin, Jeffrey - PhD
Taylor, Kerry - JD
Watson, Patrick - PhD

Criminology and Sociolegal Studies: Criminology and Sociolegal Studies MA

The **Master of Arts (MA) program** encompasses two related disciplinary and interdisciplinary fields.

The first is criminology, which can be briefly defined as the study of all aspects of crime, including its definitions, causes, and intellectual genealogy, as well as the policy and institutional responses to it. Although criminology features some aspects of a separate discipline, including its own theoretical schools, journals, and university departments, it also draws heavily on related social science disciplines.

The field of sociolegal studies, also known as the law and society movement, is a related interdisciplinary research tradition that investigates a broad range of legal phenomena using the techniques and approaches of social science. Examples of such phenomena that the faculty have studied include citizenship and immigration policy, urban planning, and the regulation of alcohol and sex work.

The program is distinctive in that these bodies of knowledge are treated as closely related, and both of them are incorporated into the program of study. Broad intellectual exploration of these fields is incorporated by limiting the number of required courses and encouraging students to select courses (both in this and other graduate programs) that reflect their own intellectual and professional priorities. Likewise, students are given the option of meeting their degree requirements by completing eight taught half-courses or by completing six taught half-courses and writing a master's research paper (MRP) that allows them to develop an independent research project under the supervision of a faculty member. While specialized professional or technical training meant to be directly transferable into criminal justice occupations is not provided, we welcome applications by criminal justice professionals who wish to pursue part-time studies.

The MA program enjoys an excellent national and international reputation, and graduates are sought by employers in both the public and private sectors who appreciate the theoretically and academically rigorous interdisciplinary social science training that is provided.

MA Program (Coursework Only Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the additional admission requirements of the Centre for Criminology and Sociolegal Studies stated below.
- Applicants must have an appropriate bachelor's degree from a recognized university. An appropriate bachelor's degree normally consists of 20 full-course equivalents (FCEs). Applicants with arts and science degrees will normally be required to have at least a B+ standing. Applicants from law schools who have already completed a JD degree or its equivalent will normally be required to have at least a B standing.
- Although many applicants to the MA program have some training in criminology or sociolegal studies, students from a variety of disciplinary and interdisciplinary backgrounds are welcomed. It would be advantageous for MA students in the program to have some familiarity with the approaches and methodologies associated with the social sciences. However, outstanding students from the humanities and behavioral and natural sciences will also be considered.
- The program can be completed on a full-time or part-time basis. All students will be required to complete the program within the time limits set for the MA degree under the General Regulations of the School of Graduate Studies. Students with professional experience who meet the academic admission requirements are encouraged to apply to the program.
- It is essential that all incoming graduate students have a command of English. Proficiency in the English language must be demonstrated by all applicants educated outside Canada whose primary language is not English, and who graduated from a university where the language of instruction and examination was not English. This requirement must be satisfied using a Test of English as a Foreign Language (TOEFL) with a verbal and a written component. To be considered for admission, applicants must achieve the following minimum scores:
  - paper-based TOEFL exam: 580 and 5 on the Test of Written English (TWE)
  - Internet-based TOEFL exam: 93/120 and 22/30 on the writing and speaking sections.

  Official copies of these scores must be submitted to the University of Toronto before a formal offer of admission can be made.

Completion Requirements

- MA students can complete the program on a coursework only basis by completing **4.0 full-course equivalents (FCEs)** within 9 months.
- The degree program includes compulsory and elective courses.
  - The compulsory course (0.5 FCE) is CRI2010H *Methodological Issues in Criminology and Sociolegal Studies*.
  - The elective courses allow students to engage in specialized study of different approaches to, and topics within, criminology and sociolegal studies. The elective courses offered may vary from year to year. In certain cases a student may, with the approval of the Graduate Coordinator, substitute a maximum of 1.5 FCEs from other graduate units in lieu of elective courses in criminology or sociolegal studies.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MA Program (Research Paper Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the additional admission requirements of the Centre for Criminology and Sociolegal Studies stated below.
- Applicants must have an appropriate bachelor's degree from a recognized university. An appropriate bachelor's degree normally consists of 20 full-course equivalents (FCEs). Applicants with arts and science degrees will normally be required to have at least a B+ standing. Applicants from law schools who have already completed a JD degree or its equivalent will normally be required to have at least a B standing.
- Although many applicants to the MA program have some training in criminology or sociolegal studies, students from a variety of disciplinary and interdisciplinary backgrounds are welcomed. It would be advantageous for MA students in the program to have some familiarity with the approaches and methodologies associated with the social sciences. However, outstanding students from the humanities and behavioral and natural sciences will also be considered.
- The program can be completed on a full-time or part-time basis. All students will be required to complete the program within the time limits set for the MA degree under the General Regulations of the School of Graduate Studies. Students with professional experience who meet the academic admission requirements are encouraged to apply to the program.
- It is essential that all incoming graduate students have a command of English. Proficiency in the English language must be demonstrated by all applicants educated outside Canada whose primary language is not English, and who graduated from a university where the language of instruction and examination was not English. This requirement must be satisfied using a Test of English as a Foreign Language (TOEFL) with a verbal and a written component. To be considered for admission, applicants must achieve the following minimum scores:
  - paper-based TOEFL exam: 580 and 5 on the Test of Written English (TWE)
  - Internet-based TOEFL exam: 93/120 and 22/30 on the writing and speaking sections.

  Official copies of these scores must be submitted to the University of Toronto before a formal offer of admission can be made.

Completion Requirements

- MA students can also complete the program by completing **3.0 FCEs and a research paper** (CRI3360Y) within 12 months.
- The degree program includes compulsory and elective courses.
  - The compulsory course (0.5 FCE) is CRI2010H *Methodological Issues in Criminology and Sociolegal Studies*.
  - The elective courses allow students to engage in specialized study of different approaches to, and topics within, criminology and sociolegal studies. The elective courses offered may vary from year to year. In certain cases a student may, with the approval of the Graduate Coordinator, substitute a maximum of 1.5 FCEs from other graduate units in lieu of elective courses in criminology or sociolegal studies.

Mode of Delivery: In person
Program Length: 1 year full-time (typical registration sequence: FWS-F); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Criminology and Sociolegal Studies: Criminology and Sociolegal Studies PhD

Similar to the MA program, the **Doctor of Philosophy (PhD) program** reflects the same emphasis on interdisciplinarity and flexibility, as well as an integrated, inclusive approach to criminology and sociolegal studies.

The primary mission of the doctoral program is to prepare future professional academics for a career in teaching and research; graduates hold faculty positions throughout Canada, in the United States, and around the world.

Over the years, PhD students have pursued dissertation projects on extremely varied research questions involving aspects of crime, criminal justice institutions, and a range of sociolegal topics. Regardless of their specific focus, they have found the Centre a supportive and interactive environment. The Centre promotes such collegiality by offering students shared office space in the Centre and encouraging them to work on site and participate in the lively intellectual life and shared scholarly activities. Likewise, although PhD students work closely with a primary supervisor, they also benefit from opportunities to learn from other core and cross-appointed faculty members. In short, the goal is to train broadly educated, thoughtful scholars with a research agenda in criminology or sociolegal studies.

Students are normally paired with a prospective supervisor at the time of admission. Therefore, applicants are encouraged to identify one or more possible supervisors, as well as possible dissertation committee members, and should indicate on their application whether they have made contact with particular core or cross-appointed members of the graduate faculty for these purposes.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Centre for Criminology and Sociolegal Studies' additional admission requirements stated below.

- Applicants normally hold an MA degree in criminology or a cognate field, with a minimum A– standing or its equivalent from a recognized university. Students with MAs in disciplines unrelated to criminology or sociolegal studies may be required to take additional courses as part of their doctoral program.
- It is essential that all incoming graduate students have a command of English. Proficiency in the English language must be demonstrated by all applicants educated outside Canada whose primary language is not English and who graduated from a university where the language of instruction and examination was not English. This requirement must be satisfied using a Test of English as a Foreign Language (TOEFL) with a verbal and a written component. To be considered for admission, applicants must achieve the following minimum scores:
  - paper-based TOEFL exam: 580 and 5 on the Test of Written English (TWE)
  - Internet-based TOEFL exam: 93/120 and 22/30 on the writing and speaking sections.

  Official copies of these scores must be submitted to the University of Toronto before a formal offer of admission can be made.

Completion Requirements

- **Course requirements**. Students must complete a minimum of **2.0 full-course equivalents (FCEs)** beyond those taken at the MA level. With approval of the Graduate Coordinator, a maximum of 1.5 FCEs of these may be from another graduate unit. Students must complete, at either the MA or the PhD level, the required research methods course (CRI2010H *Methodological Issues in Criminology and Sociolegal Studies*) and the required theory course (CRI1020H *Law and State Power: Theoretical Perspectives*). With the approval of the Graduate Coordinator, students can take a theory course offered through another graduate unit in lieu of CRI1020H if the alternative course covers relevant topics. Students will normally complete all course requirements for the PhD in Year 1.
- **Professional development sequence**. Year 1 doctoral students will participate in CRI1010Y, a sequence of eight monthly workshop meetings of approximately two hours in length led by one or more faculty members and dedicated to discussion of a range of important issues in graduate professional development. Meetings will be scheduled at the beginning of the academic year, and attendance will be taken at each meeting. Students must normally attend at least six workshop meetings by the end of the second session of Year 1 to complete this requirement, and those who do not do so must make up the required sessions by the end of the second session of Year 2.
- **One comprehensive exam**. This exam must take the form of a major review paper. Students are required to read widely on a particular topic and identify and evaluate major theoretical debates and methodological issues. Students should provide an original, critical analysis of the literature and discuss possibilities for future work in their topic area. The comprehensive exam should normally be completed by the end of the second session of Year 2.
- **Language requirements**. Students must have an adequate knowledge of a language other than English if an additional language is deemed essential for satisfactory completion of research for the thesis.
- **Thesis**. PhD students must prepare an original thesis that is a significant contribution to knowledge in criminology or sociolegal studies. The thesis is a sustained piece of research written in an integrated series of chapters. The thesis is normally supervised by a member of the graduate faculty, with two other members of the graduate faculty serving on the thesis committee.
- **Residency**. PhD students are required to be on campus full-time for the period of their program, except for approved field research and academic exchanges. Students are expected to participate in the Centre's activities associated with the program.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

Criminology and Sociolegal Studies: Criminology and Sociolegal Studies MA, PhD Courses

All courses are half courses (0.5 full-course equivalent [FCE]), with the exception of CRI3360Y *Research Paper*. Not all courses are offered every year. Consult the Centre for Criminology and Sociolegal Studies regarding course availability.

Due to space limitations, criminology graduate students will be given priority in graduate course enrolment. All other students must receive written permission from the instructor and the Graduate Coordinator before enrolling in any of the Centre's graduate courses.

Required Courses

Course Code	Course Title
CRI1010Y	Professional Development Workshops
CRI2010H	Methodological Issues in Criminology and Sociolegal Studies

Elective Courses

Course Code	Course Title
CRI1020H	Law and State Power: Theoretical Perspectives
CRI1030H	Introduction to Science and Technology Studies: Sociolegal Approaches
CRI1050H	Transnationalism, Culture, and Power (TCP)
CRI2120H	Data Analysis
CRI2140H	Guilt, Responsibility, and Forensics

Course Code	Course Title
CRI2150H	Preventing Wrongful Convictions
CRI3020H	Criminology and the Policy-Making Process
CRI3110H	Qualitative Research Methods
CRI3130H	Policing
CRI3140H	Special Topics in Criminology and Sociolegal Studies
CRI3146H	Inequality and Criminal Justice
CRI3150H	Special Topics in Criminology and Sociolegal Studies
CRI3220H	Organized Crime and Corruption
CRI3240H	Penology
CRI3310H	Special Topics in Criminology and Sociolegal Studies
CRI3320H	The Criminal Process
CRI3330H	Contemporary Issues in Safety and Security
CRI3340H	Special Topics in Criminology and Sociolegal Studies
CRI3350H	Directed Research in Criminology and Sociolegal Studies
CRI3351H	Directed Research in Criminology and Sociolegal Studies
CRI3355H	Sentencing
CRI3356H	Youth Crime and Youth Justice
CRI3360Y	MA Research Paper

Curriculum, Teaching and Learning

CTL: Introduction

Faculty Affiliation

Ontario Institute for Studies in Education (OISE)

Degree Programs

Curriculum and Pedagogy

MA, MEd, and PhD

- Emphases:
  - Arts in Education;
  - Critical Studies in Curriculum and Pedagogy;
  - Digital Technologies in Education;
  - Indigenous Education and Decolonization;
  - Science, Mathematics and Technology (SMT);
  - Wellbeing
- Field (MEd only):
  - Online Teaching and Learning

Language and Literacies Education

MA

MEd

- Field:
  - Language Teaching

PhD

Teaching

MT

- Fields:
  - Elementary Education;
  - Secondary Education

Combined Degree Programs

- STG, English (Major), Honours BA / MT
- STG, History (Major), Honours BA / MT
- STG, Kinesiology, BKin / MT
- STG, Mathematics (Major), Honours BSc / MT
- STG, Music Education (Stream), MusBac / MT
- STG, Physical Education and Health, BPHE / MT (this program will close on August 31, 2025)
- STG, Psychology (Major), Honours BSc / MT
- STG, Sociology (Major), Honours BA / MT
- UTM, Astronomical Sciences (Specialist), Honours BSc / MT
- UTM, Biological Chemistry (Specialist), Honours BSc / MT
- UTM, Biology for Health Sciences (Major), Honours BSc / MT
- UTM, Biology (Major), Honours BSc / MT
- UTM, Biology (Specialist), Honours BSc / MT
- UTM, Chemistry (Major), Honours BSc / MT
- UTM, Chemistry (Specialist), Honours BSc / MT
- UTM, Comparative Physiology (Specialist), Honours BSc / MT
- UTM, Ecology and Evolution (Specialist), Honours BSc / MT
- UTM, Forensic Biology (Specialist), Honours BSc / MT
- UTM, Forensic Chemistry (Specialist), Honours BSc / MT
- UTM, French Studies (Major), Honours BA / MT
- UTM, French Studies (Specialist), Honours BA / MT
- UTM, Language Teaching and Learning: French and Italian (Specialist), Honours BA / MT
- UTM, Language Teaching and Learning: French (Major), Honours BA / MT
- UTM, Mathematical Sciences (Major), Honours BSc / MT
- UTM, Mathematical Sciences (Specialist), Honours BSc / MT
- UTM, Molecular Biology (Specialist), Honours BSc / MT
- UTM, Physics (Major), Honours BSc / MT
- UTSC, Biochemistry (Major), Honours BSc / MT
- UTSC, Biochemistry (Major Co-op), Honours BSc / MT
- UTSC, Biology (Major), Honours BSc / MT
- UTSC, Chemistry (Major), Honours BSc / MT
- UTSC, Chemistry (Major Co-op), Honours BSc / MT
- UTSC, Chemistry (Specialist), Honours BSc / MT
- UTSC, Chemistry (Specialist Co-op), Honours BSc / MT
- UTSC, Conservation and Biodiversity (Major), Honours BSc / MT
- UTSC, Conservation and Biodiversity (Specialist), Honours BSc / MT
- UTSC, English (Major), Honours BA / MT
- UTSC, English (Major Co-op), Honours BA / MT
- UTSC, English (Specialist), Honours BA / MT
- UTSC, English (Specialist Co-op), Honours BA / MT
- UTSC, Environmental Chemistry (Specialist), Honours BSc / MT
- UTSC, Environmental Chemistry (Specialist Co-op), Honours BSc / MT
- UTSC, Environmental Physics (Specialist), Honours BSc / MT
- UTSC, Environmental Physics (Specialist Co-op), Honours BSc / MT
- UTSC, Evolutionary Anthropology (Major), Honours BSc / MT
- UTSC, Evolutionary Anthropology (Specialist), Honours BSc / MT
- UTSC, French (Major), Honours BA / MT
- UTSC, French (Major Co-op), Honours BA / MT
- UTSC, French (Specialist), Honours BA / MT

- UTSC, French (Specialist Co-op), Honours BA / MT
- UTSC, Global Environmental Change (Specialist), Honours BSc / MT
- UTSC, Global Environmental Change (Specialist Co-op), Honours BSc / MT
- UTSC, History (Major), Honours BA / MT
- UTSC, History (Specialist), Honours BA / MT
- UTSC, Human Biology (Major), Honours BSc / MT
- UTSC, Human Biology (Specialist), Honours BSc / MT
- UTSC, Human Geography (Major), Honours BA / MT
- UTSC, Human Geography (Specialist), Honours BA / MT
- UTSC, Integrative Biology (Specialist), Honours BSc / MT
- UTSC, Mathematics (Major), Honours BSc / MT
- UTSC, Mathematics (Major Co-op), Honours BSc / MT
- UTSC, Mathematics (Specialist), Honours BSc / MT
- UTSC, Mathematics (Specialist Co-op), Honours BSc / MT
- UTSC, Medicinal and Biological Chemistry (Specialist), Honours BSc / MT
- UTSC, Medicinal and Biological Chemistry (Specialist Co-op), Honours BSc / MT
- UTSC, Molecular Biology and Biotechnology (Specialist), Honours BSc / MT
- UTSC, Molecular Biology and Biotechnology (Specialist Co-op), Honours BSc / MT
- UTSC, Molecular Biology, Immunology and Disease (Major), Honours BSc / MT
- UTSC, Physical and Mathematical Sciences (Specialist), Honours BSc / MT
- UTSC, Physics and Astrophysics (Major), Honours BSc / MT
- UTSC, Physics and Astrophysics (Specialist), Honours BSc / MT
- UTSC, Plant Biology (Major), Honours BSc / MT
- UTSC, Socio-Cultural Anthropology (Major), Honours BA / MT
- UTSC, Socio-Cultural Anthropology (Specialist), Honours BA / MT
- UTSC, Sociology (Major), Honours BA / MT
- UTSC, Sociology (Specialist), Honours BA / MT
- UTSC, Theatre and Performance (Major), Honours BA / MT

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Comparative, International and Development Education**
  - Curriculum and Pedagogy, MA, MEd, PhD
  - Language and Literacies Education, MA, MEd, PhD
- **Education, Francophonies and Diversity**
  - Curriculum and Pedagogy, MA, MEd, PhD
  - Language and Literacies Education, MA, MEd, PhD
- **Educational Policy** (admissions have been administratively suspended)
  - Curriculum and Pedagogy, MA, MEd, PhD
  - Language and Literacies Education, MA, MEd, PhD
- **Engineering Education**
  - Curriculum and Pedagogy, MA, PhD
- **Ethnic, Immigration and Pluralism Studies**
  - Language and Literacies Education, MA, MEd, PhD
- **Knowledge Media Design**
  - Curriculum and Pedagogy, MA, MEd, PhD
  - Language and Literacies Education, MA, MEd, PhD
- **Sexual Diversity Studies**
  - Curriculum and Pedagogy, MA, MEd, PhD
- **Women and Gender Studies**
  - Curriculum and Pedagogy, MA, MEd, PhD
  - Language and Literacies Education, MA, MEd, PhD

Overview

The Department of Curriculum, Teaching and Learning (CTL) is the largest of four departments at the Ontario Institute for Studies in Education (OISE). With a diverse community of tenured and tenure-stream faculty as well as lecturers, the department offers a wide range of graduate courses and programs relating to academic scholarship and professional practice. Faculty and students research, write, and teach about a wide variety of subjects concerning children, youth, and teachers, both in and out of schools.

The department offers graduate programs in three areas of study: 1) Curriculum & Pedagogy; 2) Language and Literacies Education; and 3) Teaching. These programs reflect a variety of scholarly interests and are closely linked with the department's strong research base.

Contact and Address

Admissions

Initial inquiries regarding admission to graduate studies in the Department of Curriculum, Teaching and Learning (CTL) should be made directly to:

Web: www.oise.utoronto.ca/registrar-students
Email: admissions.oise@utoronto.ca
Tel: (416) 978-4300
Fax: (416) 323-9964

Registrar's Office and Student Experience
Ontario Institute for Studies in Education (OISE)
University of Toronto
252 Bloor Street West, Room 8-225
Toronto, Ontario M5S 1V6
Canada

Program

Web: www.oise.utoronto.ca/ctl
Email: www.oise.utoronto.ca/ctl/contact

Department of Curriculum, Teaching and Learning
Ontario Institute for Studies in Education
University of Toronto
252 Bloor Street West, 11th Floor
Toronto, Ontario M5S 1V6
Canada

CTL: Graduate Faculty

Full Members

Bale, Jeff - BA, MS, PhD
Bickmore, Kathy - MA, PhD
Brant, Jennifer - BA, MEd, PhD
Burke, Carol-Ann - DipEd, BA, MEd, PhD
Cavalcante, Alexandre - MASc
Cooper, Karyn - PhD
Gallagher, Kathleen Marie - PhD
Gaztambide-Fernandez, Ruben - BM, MEd, EdD
Gilbert, Jennifer - BA, MA, PhD ***(Chair and Graduate Chair)***
Gitari, Wanja - BEd, MA, PhD
Goldstein, Tara - BA, PhD
Hewitt, Jim - BEd, BMath, MEd, PhD ***(Associate Chair, Graduate Studies)***
Kempf, Arlo - BA, MEd, PhD
Kerekes, Julie - BA, MA, PhD
Labrie, Normand - BA, MA, PhD
Lam, Tony - BA, MA, PhD
Levine, David - BA, MA, PhD
Lory, Marie-Paule - BA, MS, MS, PhD
Mantie, Roger Allan - BM, MM, PhD
McDougall, Douglas - BM, BEd, MEd, EdD
Miller, John - BA, MAT, PhD
Morgan, Cecilia Louise - BA, BA, MA, PhD
Niyozov, Sarfaroz - MEd, MA, PhD
Nxumalo, Fikile - PhD
Pedretti, Erminia - BE, MEd, PhD
Piccardo, Enrica - MA, PhD
Rehner, Katherine - BA, BE, MEd, PhD
Robles Garcia, Pablo - BA, MA
Scardamalia, Marlene - PhD
Simon, Rob - BA, MA, MTh, PhD
Slotta, James - BS, MPsy, PhD
Stagg Peterson, Shelley - BE, MEd, PhD
Steele, Jeffrey - BA, MA, PhD
Styres, Sandra - BEd, MEd, PhD
Trifonas, Peter Pericles - BE, BA, PhD

Members Emeriti

Beattie, Mary - BA, BA, MA, MEd, EdD
Bencze, Lawrence - BEd, BSc, MSc, PhD
Brett, Clare - BA, MA, PhD
Campbell, Elizabeth - BA, BEd, MEd, PhD
Cummins, James - BA, PhD
Evans, Mark - BE, BA, MA, PhD
Gagne, Antoinette - BEd, MEd, PhD
Hanna, Gila - BA, MA, MEd, PhD
Jordan, Anne - BA, MA, PhD
Kosnik, Clare - DPhil, DPhil
Rolheiser, Carol - BEd, MEd, PhD
Sandwell, Ruth - BA, MA, PhD
Smyth, Elizabeth - BA, BEd, MA, EdD
Sykes, Heather - BSc, PhD
Troper, Harold - BA, MA, PhD

Associate Members

Alexander, Qui - AB, PhD
Allen, Guy - BA, MA, PhD
Broad, Kathy - BEd, BA, MEd, PhD
Brownell, Cassie - BA, MEd, PhD
Campbell, Andrew - BPHRE, MEd, PhD
DeBraga, Michael - BS, MS, PhD
Dubek, Michelle - PhD
Eidoo, Sameena - EdD
Gini-Newman, Garfield - BA, BE, MA
Guerson De Oliveira, Alexandra - BA, BCL, PhD
Lawrence, Geoffrey - PhD
Lui, Michelle - BPhm, PhD
MacKinnon, Kimberley - BA, MA, PhD
Marks Krpan, Cathy - BEd, MEd, EdD
Marzi, Elham - BA, BIS, MIR, PhD
Montemurro, David - BEd, BA, MES
Reid, Mary - BA, BEd, MEd, EdD
Rodricks, Dirk J. - BA, MEd, PhD
Stewart Rose, Leslie - BEd, BM, MA, EdD
Tucker, Shawna-Kaye - BA, MSc
Vemic, Angela - BA, BEd, MA, PhD
Wang, Zhaozhe - BA, MA, PhD
White, Robert - PhD
Zingaro, Daniel - BCS, MEd, MCS

CTL: Curriculum and Pedagogy Overview

The Curriculum and Pedagogy (C&P) program is a forum for systematic reflection on curriculum and pedagogy, viewed in the broadest sense as educational experiences and the learning and teaching experiences that occur in both formal and informal settings. This includes a critical examination of the substance (subject matter, courses, programs of study), purposes, and the practices and relationships through which teaching and learning happen in educational settings. Given the diverse academic and research interests of faculty members, the program is organized into six program emphases.

The C&P program offers the following six program emphases:

- Arts in Education
- Critical Studies in Curriculum and Pedagogy
- Digital Technologies in Education
- Indigenous Education and Decolonization
- Science, Mathematics and Technology (SMT)
- Wellbeing

PhD, MA, and MEd students enrolled in the C&P program are required to complete three courses from a list of courses affiliated with the emphasis, in order to have the emphasis noted on their transcript. Upon successful completion of the emphasis requirements and successful completion of the degree requirements, students may make a request with the C&P administrator, prior to graduation, to have the emphasis noted on the student transcript.

CTL: Curriculum and Pedagogy MA

The MA degree program is designed to provide academic study and research training related to curriculum and pedagogy. Applicants who anticipate going on to further study at the PhD level are advised to apply for enrolment in an MA rather than an MEd degree program.

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

The MA can be taken on a full-time or part-time basis.

Master of Arts

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Curriculum, Teaching and Learning's additional admission requirements stated below.
- Admission normally requires an appropriate bachelor's degree, with the equivalent of at least a University of Toronto mid-B or better in the final year, in a relevant discipline or professional program.
- Ordinarily, applicants will have at least one year of relevant, successful, professional experience prior to applying.
- Responses to Faculty questions in the online admissions application: Applicants should state the reasons they wish to undertake a research-oriented program of study in curriculum and pedagogy. The chief academic interests and experience, professional concerns, and career plans related to any aspect of curriculum and pedagogy should be discussed. In order to identify their research interests in their responses to the Faculty questions, applicants should visit the Curriculum and Pedagogy program web page.
- The Admissions Committee reviews these responses to determine the areas of study and/or problems of curriculum and pedagogy in which an applicant is most interested and to link the applicant to appropriate faculty advisors.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **4.0 full-course equivalents (FCEs)** as follows:
  - At least 2.0 FCEs, normally CTL 1000-level courses undertaken in the Curriculum and Pedagogy program.
  - CTL1000H *Foundations of Curriculum & Pedagogy*.
  - A research methods course (0.5 FCE) from an approved course listing.
  - Additional courses may be required of some applicants, depending on previous experience and academic qualifications.
- **Thesis.**
- Students are responsible for meeting deadlines to complete their course requirements, thesis committee formation, and thesis ethical review.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 10 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

CTL: Curriculum and Pedagogy MEd General Program (No Field)

The Master of Education (MEd) degree program is designed chiefly for the professional development of those who are already engaged in a career related to education, broadly defined. Applicants who anticipate going on to further study at the PhD level are advised to apply for enrolment in an MA rather than an MEd degree program. The MEd program is offered as a general program (no field) or as an Online Teaching and Learning field. The field in Online Teaching and Learning is designed for students interested in engaging with scholarly research in distance education and who want to learn how to effectively instruct and design online courses.

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

The MEd can be taken on a full-time or part-time basis.

Note: The MEd is not a teacher certification program. Find out more about teacher certification programs.

MEd General Program (No Field)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies, which specify an appropriate bachelor's degree from a recognized university. This degree must be completed with an academic standing equivalent to a University of Toronto mid-B or better in the final year. Applicants must also satisfy the Department of Curriculum, Teaching and Learning's additional admission requirements stated below.
- Ordinarily, applicants will have at least one year of relevant, successful, professional experience prior to applying.
- Responses to Faculty questions in the online admissions application: applicants should state the reasons they wish to study curriculum at the graduate level. The chief academic interests, professional concerns, and career plans related to curriculum studies and teacher development should be discussed. In order to identify their research interests in the responses to the Faculty questions, applicants should visit the Curriculum and Pedagogy program web page. The admissions committee reviews these responses to determine the kind of focus or area of study in which an applicant is most interested and to link the applicant to appropriate faculty advisors.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **5.0 full-course equivalents (FCEs)** as follows:
  - At least 2.5 FCEs, normally CTL 1000-level courses undertaken in the Curriculum and Pedagogy program.
  - CTL1000H *Foundations of Curriculum & Pedagogy*.

- Additional study may be required either within the degree program or prior to admission, depending on previous experience and academic qualifications.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F); 10 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

CTL: Curriculum and Pedagogy MEd; Field: Online Teaching and Learning

The Master of Education (MEd) degree program is designed chiefly for the professional development of those who are already engaged in a career related to education, broadly defined. Applicants who anticipate going on to further study at the PhD level are advised to apply for enrolment in an MA rather than an MEd degree program. The MEd program is offered as a general program (no field) or as an **Online Teaching and Learning field**. The field in Online Teaching and Learning is designed for students interested in engaging with scholarly research in distance education, who want to learn how to effectively instruct and design online courses.

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

The MEd can be taken on a full-time or part-time basis.

Note: The MEd is not a teacher certification program. Find out more about teacher certification programs.

Field: Online Teaching and Learning

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies, which specify an appropriate bachelor's degree from a recognized university. This degree must be completed with an academic standing equivalent to a University of Toronto mid-B or better in the final year. Applicants must also satisfy the Department of Curriculum, Teaching and Learning's additional admission requirements stated below.
- Ordinarily, applicants will have at least one year of relevant, successful, professional experience prior to applying.
- Responses to Faculty questions in the online admissions application: applicants should state the reasons they wish to study curriculum at the graduate level. The chief academic interests, professional concerns, and career plans related to curriculum studies and teacher development should be discussed. In order to identify their research interests in their responses to the Faculty questions, applicants should visit the Curriculum and Pedagogy program web page. The admissions committee reviews these responses to determine the kind of focus or area of study in which an applicant is most interested and to link the applicant to appropriate faculty advisors.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **5.0 full-course equivalents (FCEs)** as follows:
  - 1.5 FCEs in required courses:
    - CTL1000H *Foundations of Curriculum & Pedagogy*
    - CTL1620H *Foundations of Online Teaching and Learning*
    - CTL1624H *Instructional Design: Beyond the Lecture*.
  - 1.5 FCEs from the following: CTL1603H, CTL1606H, CTL1608H, CTL1609H, CTL1615H, CTL1616H, CTL1617H, CTL1621H, CTL1622H, CTL1623H, CTL1625H, CTL1926H.
  - 2.0 FCEs in elective courses.
- Additional study may be required either within the degree program or prior to admission, depending on previous experience and academic qualifications.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F); 10 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

CTL: Curriculum and Pedagogy PhD

The PhD program demands a strong commitment to research. The Curriculum and Pedagogy program offers both full-time and flexible-time PhD program options. Degree requirements for both options are the same; only the length of time to completion differs (see Program Length below). Applicants must declare the option for which they wish to apply.

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Curriculum, Teaching and Learning's additional admission requirements stated below.
- A master's degree in education from a recognized university with a grade equivalent to a University of Toronto B+ or better and in the same area of specialization as proposed at the doctoral level is required. Further documentation may be required to establish equivalence.
- Applicants ordinarily have a minimum of two years' professional experience prior to applying.
- Applicants are required to submit, along with the application:

- Their master's thesis or a sample of single-authored scholarly writing; for details about what constitutes an appropriate writing sample, visit the Curriculum and Pedagogy program web page.
- Responses to Faculty questions in the online admissions application describing their intellectual interests and concerns relevant to curriculum and pedagogy, reasons for wishing to take the program, previous qualifications and professional experiences, and articulating their research and professional interests, and future career goals
- Two letters of reference: one academic and one professional.

Completion Requirements

- **Coursework.** Students must normally complete a total of **3.5 full-course equivalents (FCEs)** as follows:
  - At least 2.0 FCEs, normally CTL 1000-level courses.
  - CTL1899H *C&P Doctoral Proseminar in Curriculum & Pedagogy*.
  - Students are expected to take CTL1000H *Foundations of Curriculum & Pedagogy* if they did not complete it at the master's level
  - Additional courses may be required of some students.
  - One research methods course (0.5 FCE) from an approved course listing.
- **Comprehensive examination**. The Curriculum and Pedagogy comprehensive exam is a 7,000-word paper usually written after students complete their coursework, and at the latest by the end of Year 3 of the PhD, before the candidacy deadline. The purpose of this exam is to demonstrate proficiency in major current theories and literature in the field of curriculum studies and is designed to ascertain whether a student has obtained the knowledge and skills to continue in the doctoral program. The exam has three possible outcomes: Pass, Pass-Contingent, and Fail. Students who receive the Pass-Contingent result will have the opportunity to address the reviewers' concerns. Students who fail the first time will have one further opportunity to rewrite the exam.
- A **thesis** embodying the results of an original investigation, and a **Doctoral Final Oral Examination** on the content and implications of the thesis.
- Students are responsible for meeting deadlines to complete their course requirements, thesis committee formation, comprehensive examination, and thesis ethical review.
- Full-time PhD students must maintain full-time status throughout their program of study.
- Students must register continuously and pay the full-time fee until all degree requirements have been fulfilled.
- Students cannot transfer between the full-time and flexible-time PhD options.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Flexible-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Curriculum, Teaching and Learning's additional admission requirements stated below.
- A master's degree in education from a recognized university with a grade equivalent to a University of Toronto B+ or better and in the same area of specialization as proposed at the doctoral level is required. Further documentation may be required to establish equivalence.
- Applicants ordinarily have a minimum of two years' professional experience prior to applying.
- Applicants are required to submit, along with the application:
  - Their master's thesis or a sample of single-authored scholarly writing; for details about what constitutes an appropriate writing sample, visit the Curriculum and Pedagogy program web page.
  - Responses to Faculty questions in the online admissions application describing their intellectual interests and research concerns relevant to curriculum and pedagogy, reasons for wishing to take the program, previous qualifications and professional experiences, and articulating their research and professional interests, and future career goals.
  - Two letters of reference: one academic and one professional.
- Applicants to the flexible-time PhD option are accepted under the same admission requirements as applicants to the full-time PhD option. Applicants must demonstrate that they are currently employed and are active professionals engaged in activities relevant to their proposed program of study.

Completion Requirements

- **Coursework.** Students must normally complete a total of **3.5 full-course equivalents (FCEs)** as follows:
  - At least 2.0 FCEs, normally CTL 1000-level courses.
  - CTL1899H *C&P Doctoral Proseminar in Curriculum & Pedagogy*.
  - Students are expected to take CTL1000H *Foundations of Curriculum & Pedagogy* if they did not complete it at the master's level.
  - One research methods course (0.5 FCE) from an approved course listing.
  - Additional courses may be required of some students.
- **Comprehensive examination**. The Curriculum and Pedagogy comprehensive exam is a 7,000-word paper usually written after students complete their coursework, and at the latest by the end of Year 4 of the PhD, before the candidacy deadline. The purpose of this exam is to demonstrate proficiency in major current theories and literature in the field of curriculum studies and is designed to ascertain whether a student has obtained the knowledge and skills to continue in the doctoral program.

The exam has three possible outcomes: Pass, Pass-Contingent, and Fail. Students who receive the Pass-Contingent result will have the opportunity to address the reviewers' concerns. Students who fail the first time will have one further opportunity to rewrite the exam.
- A **thesis** embodying the results of an original investigation, and a **Doctoral Final Oral Examination** on the content and implications of the thesis.
- Students are responsible for meeting deadlines to complete their course requirements, thesis committee formation, comprehensive examination, and thesis ethical review.
- Students must register continuously until all degree requirements have been fulfilled. They must register full-time during the first four years and may continue as part-time thereafter, with their department's approval.
- Students cannot transfer between the full-time and flexible-time PhD options.

Mode of Delivery: In person
Program Length: 8 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

CTL: Language and Literacies Education Overview

The Language and Literacies Education program investigates questions about the relationships of literacies in language and language in literacies across communities, societies, instructional environments, and informal learning settings.

Language and Literacies Education courses address current issues in the study of applied linguistics and literacies, such as:

- The learning, teaching, and use of additional, Indigenous, official, international/heritage, and sign languages and literacies;
- Curriculum, instruction, and assessment related to the development of first and additional languages and K–12 literacy skills;
- The development of bilingual, multilingual, and translinguistic abilities;
- Language and literacy education policies and planning;
- Pedagogy oriented to multiliteracies development, including early literacy and adolescent reading, writing and oral language development, and children's literature across the curriculum;
- Social justice issues related to plurilingualism and cultural and linguistic diversity; and
- Pedagogical implications of the fact that language and literacy are infused into all aspects of learning in contexts characterized by linguistic diversity.

CTL: Language and Literacies Education MA

Applicants expecting to pursue a doctorate in the future are advised to enrol in the MA (rather than the MEd) program in Language and Literacies Education (LLE). The MA program can be taken on a full-time or part-time basis.

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

Master of Arts

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Admission requires an appropriate bachelor's degree, with the equivalent of a University of Toronto mid-B or better in the final year, in a relevant discipline or professional program. Applicants must also satisfy the Department of Curriculum, Teaching and Learning's additional admission requirements stated below.
- Ordinarily, applicants should have teacher certification and at least one year of relevant successful professional experience prior to applying.
- Responses to Faculty questions in the online admissions application: for detailed information on presenting research interests while answering the Faculty questions, applicants should visit the Language and Literacies in Education MA degree program web page.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **4.0 full-course equivalents (FCEs)** or eight half courses as follows.
  - A minimum of 2.0 FCEs in CTL 3000-level courses within the LLE program including CTL3001H *Research Colloquium in Language and Literacies Education*.
  - A research methods course relevant to the topic of the thesis (0.5 FCE). Any of the following courses can fulfil this requirement: CTL1018H, CTL1041H, CTL1306H, CTL3033H, CTL3807H, APD1296H, APD3202H, JOI1287H, JOI1288H, JOI3228H, or SJE1905H.
  - Students wishing to propose an alternative course to fulfil one of the LLE course requirements will be required to obtain the approval of both the LLE graduate program coordinator and either their faculty advisor or their thesis supervisor.
  - Additional courses may be required of some applicants.
- **Thesis.**
- Students are responsible for meeting deadlines to complete their course requirements, thesis committee formation, and thesis ethical review.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 10 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

CTL: Language and Literacies Education MEd

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

The Master of Education (MEd) degree program can be taken on a full-time or part-time basis.

Master of Education

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies, which specify an appropriate bachelor's degree from a recognized university, with the equivalent of a University of Toronto mid-B or better in the final year. Applicants must also satisfy the Department of Curriculum, Teaching and Learning's additional admission requirements stated below.
- Ordinarily, applicants should have teacher certification and at least one year of relevant successful professional experience prior to applying.
- Responses to Faculty questions in the online admissions application: applicants should state the reasons they wish to study language and literacies in education at the graduate level. For detailed information on answering the Faculty questions and completing the application, applicants should visit the Language and Literacies in Education MEd degree program web page.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **5.0 full-course equivalents (FCEs)** including:
  - A minimum of 2.5 FCEs in CTL 3000-level courses.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F); 10 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

CTL: Language and Literacies Education MEd; Field: Language Teaching

Within the existing Master of Education (MEd) degree program, the field in Language Teaching includes a structured focus on language teaching foundations. Language Teaching integrates an engagement with scholarly research in Language and Literacies Education with a commitment to excellence in teaching to support graduate students as novice language teachers. Students pursuing this field will graduate with: (a) a solid theoretical and intellectual grounding in LLE research; (b) a course-based, practitioner focus on language teaching foundations; and (c) gained practical experience in a language-education context through a required practicum.

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

This field is only available on a full-time basis. Priority will be given to novice teachers with less than a year of teaching experience. This field will not lead to Teaching English as a Second Language (TESL) Ontario certification nor to the Certificate of Qualification and Registration with the Ontario College of Teachers.

Field: Language Teaching

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies, which specify an appropriate bachelor's degree from a recognized university, with the equivalent of a University of Toronto mid-B or better in the final year. Applicants must also satisfy the Department of Curriculum, Teaching and Learning's additional admission requirements stated below.
- Normally, applicants should have at least one year of professional experience prior to applying. Previous classroom teaching experience is not a requirement.
- Responses to Faculty questions in the online admissions application: applicants should state the reasons they wish to study language and literacies in education at the graduate level. For detailed information on answering the Faculty questions and completing the application, applicants should visit the Language and Literacies in Education MEd Field in Language Teaching degree program web page.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **5.0 full-course equivalents (FCEs)** as follows:
  - All students in this field must take the following three courses (1.5 FCEs):
    - CTL3002H *Second Language Teaching Methodologies*
    - CTL3010H *Second Language Learning*
    - CTL3796H *LLE Practicum for MEd Field in Language Teaching*

- Students must then choose any two of the following courses (1.0 FCE):
  - CTL3000H *Foundations of Bilingual and Multicultural Education*
  - CTL3003H *Planning and Organizing the Second Language Curriculum*
  - CTL3008H *Critical Pedagogy, Language, and Cultural Diversity*
  - CTL3013H *Language Assessment*
  - CTL3020H *Writing in a Second Language*
  - CTL3039H *Academic English Research and Acquisition*
  - CTL3101H *Language Awareness for Language Educators*
- The remaining 2.5 FCEs can be elective courses taken towards the requirements of a collaborative specialization if applicable, or courses offered within the Department of Curriculum, Teaching and Learning or other departments at OISE or the University of Toronto.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F)
Time Limit: 3 years full-time

CTL: Language and Literacies Education PhD

Students participating in the PhD program must have a strong commitment to research.

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

The Language and Literacies Education (LLE) program offers both full-time and flexible-time PhD options. Degree requirements for the full-time and flexible-time options are the same. Applicants must declare their preferred option when applying.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Curriculum, Teaching and Learning's additional admission requirements stated below.
- An appropriate master's degree with a grade equivalent to a University of Toronto B+ or better from a recognized university is required.
- Admission is contingent upon satisfactory completion of a master's thesis, or the equivalent in the form of a scholarly piece of writing.
- Ordinarily, applicants will have a minimum of two years of relevant professional experience prior to applying.
- Responses to Faculty questions in the online admissions application: applicants should state the reasons they wish to study language and literacies in education at the graduate level. For detailed information on answering the Faculty questions and completing the application, applicants should visit the Language and Literacies in Education PhD degree program web page.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **3.5 to 4.0 full-course equivalents (FCEs)** depending on previous experience and academic qualifications, as follows:
  - A minimum of 2.0 FCEs within the LLE program, including CTL3001H *Research Colloquium in Language and Literacies Education*, if not previously taken at the master's level. If CTL3001H was taken at the master's level, students are not permitted to take it again and should substitute it with another LLE program course (0.5 FCE).
  - CTL3899H *Proseminar in Language and Literacies Education*, if not previously taken at the master's level. If CTL3899H was taken at the master's level, students are not permitted to take it again and should substitute it with another LLE program course (0.5 FCE).
  - A research methods course relevant to the topic of the thesis (0.5 FCE). Any of the following courses can fulfil this requirement: CTL1018H, CTL1041H, CTL1306H, CTL3033H, CTL3807H, APD1296H, APD3202H, JOI1287H, JOI1288H, JOI3228H, or SJE1905H.
  - A student wishing to propose an alternative course to fulfil one of the LLE course requirements must obtain the approval of the LLE program coordinator and either their faculty advisor or thesis supervisor.
- **Comprehensive examination**, which consists of two parts. 1) The first is longer, untimed, and generally related to the area of study that doctoral students intend to pursue for their dissertation. 2) The second is timed (two weeks for full-time PhD students, four weeks for flexible-time PhD students) and is designed to assess students' breadth of knowledge in LLE.
  Students are provided six prompts addressing a wide range of questions related to LLE (theory, major research domains, research methods); they choose one and write a response within the specified timeframe.
  The Comprehensive Exam is offered twice per year (winter and summer). While students are encouraged to initiate the process as close to the end of their coursework as possible, they must successfully pass the exam by the end of the Year 3.
  Papers are evaluated as Pass, Revise and Resubmit, or Fail. Students who receive a Fail may attempt the exam one more time.
- A **thesis** embodying the results of an original investigation, and a **Doctoral Final Oral Examination** on the content and implications of the thesis.
- Students are responsible for meeting deadlines to complete their course requirements, thesis committee formation, comprehensive examination, and thesis ethical review.
- Full-time PhD students must maintain full-time status throughout their program of study.
- Students must register continuously and pay the full-time fee until all degree requirements have been fulfilled.

- Students cannot transfer between the full-time and flexible-time PhD options.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Flexible-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Curriculum, Teaching and Learning's additional admission requirements stated below.
- An appropriate master's degree with a grade equivalent to a University of Toronto B+ or better from a recognized university is required.
- Admission is contingent upon satisfactory completion of a master's thesis, or the equivalent in the form of a scholarly piece of writing.
- Ordinarily, applicants will have a minimum of two years of relevant professional experience prior to applying.
- Responses to Faculty questions in the online admissions application: applicants should state the reasons they wish to study language and literacies in education at the graduate level. For detailed information on answering the Faculty questions and completing the application, applicants should visit the Language and Literacies in Education PhD degree program web page.
- Applicants must demonstrate that they are currently employed and are active professionals engaged in activities relevant to their proposed program of study.

Completion Requirements

- **Coursework.** Students must complete **3.5 to 4.0 full-course equivalents (FCEs)** depending on previous experience and academic qualifications, as follows:
  - A minimum of 2.0 FCEs within the LLE program, including CTL3001H *Research Colloquium in Language and Literacies Education* (0.5 FCE) and CTL3899H *Proseminar in Language and Literacies Education* (0.5 FCE), if not previously taken at the master's level. If CTL3001H or CTL3899H was taken at the master's level, students are not permitted to take it again and should substitute it with another LLE program course (0.5 FCE).
  - A research methods course relevant to the topic of the thesis (0.5 FCE). Any of the following courses can fulfil this requirement: CTL1018H, CTL1041H, CTL1306H, CTL3033H, CTL3807H, APD1296H, APD3202H, JOI1287H, JOI1288H, JOI3228H, or SJE1905H.
  - A student wishing to propose an alternative course to fulfil one of the LLE course requirements will be required to obtain the approval of the LLE program coordinator and either their faculty advisor or thesis supervisor.
- **Comprehensive examination**, which consists of two parts. 1) The first is longer, untimed, and generally related to the area of study that doctoral students intend to pursue for their dissertation. 2) The second is timed (two weeks for full-time PhD students, four weeks for flexible-time PhD students) and is designed to assess students' breadth of knowledge in LLE.
  Students are provided six prompts addressing a wide range of questions related to LLE (theory, major research domains, research methods); they choose one and write a response within the specified timeframe.
  The Comprehensive Exam is offered twice per year (winter and summer). While students are encouraged to initiate the process as close to the end of their coursework as possible, they must successfully pass the exam by the end of Year 4.
  Papers are evaluated as Pass, Revise and Resubmit, or Fail. Students who receive a Fail may attempt the exam one more time.
- A **thesis** embodying the results of an original investigation, and a **Doctoral Final Oral Examination** on the content and implications of the thesis.
- Students are responsible for meeting deadlines to complete their course requirements, thesis committee formation, comprehensive examination, and thesis ethical review.
- Students must register continuously until all degree requirements have been fulfilled. They must register full-time during the first four years and may continue as part-time thereafter, with their department's approval.
- Students cannot transfer between the full-time and flexible-time PhD options.

Mode of Delivery: In person
Program Length: 7 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

CTL: Teaching MT

This program involves two years of full-time study leading to a Master of Teaching (MT) degree. Upon successful completion of this program, students will be recommended to the Ontario College of Teachers for an Ontario Teachers' Certificate of Qualification, which qualifies them to teach in either the Primary and Junior (P/J) divisions, the Junior and Intermediate (J/I) divisions, or the Intermediate and Senior (I/S) divisions of Ontario schools.

The MT program offers students a unique educational opportunity, which combines teacher qualification with advanced study of educational theory and an opportunity to conduct research. The program provides students with a strong grounding in curriculum; human development; ethics and educational law; equity diversity and inclusion; Indigenous education; educational technology; instructional planning; instructional design; and learning theory. Students have three practice teaching experiences in which they develop their skills as teachers and extend the theoretical and practical knowledge they acquired in the academic portion of the program.

The program includes: formal coursework, teaching and research seminars, and practice teaching.

The 20-month program is normally completed on a full-time basis in 5 terms:

- Terms 1 and 2 (Fall and Winter sessions [September to April])
- Term 3 (Summer session [May to August])
- Terms 4 and 5 (Fall and Winter sessions [September to April]).

Registration in Terms 4 and 5 is contingent upon successful completion of all courses in Terms 1, 2, and 3 and two successful placements.

Applicants must select one of the following teaching divisions:

- Primary/Junior (junior kindergarten to grade 6)
- Junior/Intermediate (grades 4 to 10)
- Intermediate/Senior (grades 7 to 12).

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

Master of Teaching

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Curriculum, Teaching and Learning's additional admission requirements stated below.
- Applicants must have an appropriate bachelor's degree with the equivalent of a University of Toronto mid-B or better in the final year.
- Applications are submitted to the specific division(s) of interest (i.e., Primary/Junior, Junior/Intermediate, or Intermediate/Senior). Applicants are required to respond to three questions in which they describe significant teaching and/or teaching-related experiences that they have had, especially with groups of learners. With reference to these experiences, applicants should identify insights gained about teaching and learning, and explain how, based on these insights, they might contribute to the education of students in today's schools. In their resumé, applicants are requested to list, in chart form, the extent of their teaching experiences.
- **Applicants to the Junior/Intermediate (J/I) division within the Elementary field** must select **one subject specialization, known as "teachable" or "teaching subject**." Before applying to the J/I division, applicants must ensure they have the required number of prerequisite courses for the teaching subject. The prerequisites for teaching subjects in the J/I division are a minimum of 3.0 full-course equivalents (FCEs) for the teaching subject from a recognized university. Note that the prerequisite for French (Second Language) is 5.0 FCEs. For more details about subject specializations and their prerequisites, visit the MT program website.
- **Applicants to the Intermediate/Senior (I/S) division within the Secondary field** must have **two subject specializations, known as "teachable" or "teaching subject**," of which one subject is selected as their **first** subject specialization and one as their **second** subject specialization. Before applying to the I/S division, applicants must ensure they have the required number of prerequisite courses for the teaching subject. The prerequisites are a minimum of 6.0 FCEs in the first teaching subject and a minimum of 3.0 FCEs in the second teaching subject from a recognized university. Note that the prerequisites for the teaching subjects French (Second Language), Science-Biology, Science-Chemistry, Science-Physics, and Science-General are 6.0 FCEs regardless of whether these teaching subjects are first or second subject specializations. For more details about subject specializations and their prerequisites, visit the MT program website.
- Not all eligible applicants are guaranteed admission.
- A police record check is required in both Years 1 and 2 as part of the practice teaching experiences, as well as any necessary vaccination requirements that placement sites may have in place.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **11.0 full-course equivalents (FCEs)** consisting of:
  - 8.0 FCEs: 16 (or equivalent) compulsory core courses; Primary/Junior and Junior/Intermediate divisions include quarter-credit courses.
  - 1.0 FCE: 2 elective courses.
  - 2.0 FCEs: 3 practice teaching courses: CTL7080H, CTL7081H, and CTL7090Y. There is one placement per course, totalling three teaching placements (two shorter 0.5 FCE placements and one longer 1.0 FCE placement).
- On successful completion, students receive the MT degree and a recommendation to the Ontario College of Teachers for an Ontario Teachers' Certificate of Qualification.
- Eligible students registered in the **Primary/Junior division** who, in addition to an Ontario Teachers' Certificate of Qualification, wish to pursue the French as a Second Language (FSL) qualification, must successfully complete the following requirements:
  - Pass an OISE French Proficiency Test prior to completing the following two courses.
  - Complete both CTL7200H *Curriculum and Teaching in French as a Second Language — Primary/Junior* and CTL3204H *L'immersion française: enseignement et recherches* within the elective space.
  - Complete one practicum placement in a French classroom following successful completion of the French Proficiency Test and both CTL7200H and CTL3204H.
- Students registered in both the Primary/Junior and Junior/Intermediate divisions must successfully complete the non-credit seminar course CTL7100H *Mathematics Concepts for Elementary Teacher Candidates*, also known as MathPlus, during their first session of registration.
- Students registered in the **Junior/Intermediate division** must also complete:
  - 0.5 FCE: one subject specialization course selected from CTL7050H to CTL7060H in Year 2. (The list of subject specializations is subject to change.)
- Students registered in the **Intermediate/Senior division** must also complete:
  - 1.0 FCE: first subject specialization course selected from CTL7020Y to CTL7041Y.

    - 1.0 FCE: second subject specialization course selected from CTL7020Y to CTL7041Y.
    - The list of subject specializations is subject to change.
- **Religious education.** All MT students interested in teaching in the Ontario Catholic School system can choose to take the Teaching in Ontario's Catholic Schools course through the Continuing and Professional Learning office. This course is required by the Catholic boards as a prerequisite for a job interview and as a condition of employment. Offered in Year 1 of the MT program, this course is in addition to the degree's program requirements.
- Advanced standing is not granted in this program.

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW)
Time Limit: 3 years full-time

CTL: Curriculum, Teaching and Learning: Emphases

Arts in Education

Participating Programs:

- Curriculum and Pedagogy MA
- Curriculum and Pedagogy MEd General Program (No Field)
- Curriculum and Pedagogy PhD

The emphasis in Arts in Education offers students specialized courses in the areas of music and sound; drama, theatre, and performance; media and visual arts; and other courses that manifest social justice concerns reflected through the arts and cultural production. This emphasis brings together students interested in the arts; elementary and secondary arts specialist teachers and community-based educators interested in arts education in the broader community. They are a vibrant community of scholars and graduate students who thrive on collegiality, intellectual debate, critical analyses, and creative inquiry.

- **Coursework.** From the following course list, MA, MEd, and PhD students must successfully complete **1.5 full-course equivalents (FCEs)**, which are counted towards the total FCEs required for the student's degree program:
    - CTL1062H, CTL1064H, CTL1099H, CTL1100H, CTL1104H, CTL1322H, CTL1811H, CTL1818H, CTL1822H, CTL3034H, CTL5013H, CTL5018H, CTL5054H, CTL5048H.
- Upon successful completion of the emphasis requirements and the successful completion of the degree requirements, students may make a request to the C&P Program Administrator to have the emphasis noted on the student transcript. This request must be made before graduation. A course can only be applied to the requirements of a single emphasis.

Critical Studies in Curriculum and Pedagogy

Participating Programs:

- Curriculum and Pedagogy MA
- Curriculum and Pedagogy MEd General Program (No Field)
- Curriculum and Pedagogy PhD

The emphasis in Critical Studies in Curriculum and Pedagogy (CSCP) encourages a critical exploration of educational phenomena, within and beyond the scope of schools, from local place-based and transnational comparative perspectives. CSCP courses focus on social justice issues in education, including those related to environmental justice, globalization, colonialism, race, disability, gender, sexuality, conflict-peace, and cultural and linguistic differences.

- **Coursework.** From the following course list, MA, MEd, and PhD students must successfully complete **1.5 full-course equivalents (FCEs)**, which are counted towards the total FCEs required for the student's degree program:
    - CTL1011H, CTL1024H, CTL1031H, CTL1037H, CTL1048H, CTL1049H, CTL1062H, CTL1063H, CTL1064H, CTL1065H, CTL1099H, CTL1218H, CTL1219H, CTL1220H, CTL1221H, CTL1304H, CTL1306H, CTL1307H, CTL1312H, CTL1313H, CTL1318H, CTL1319H, CTL1330H, CTL1818H, CTL1822H, CTL3031H, CTL3034H, CTL5010H, CTL5048H, CTL5049H, CTL5050H, CTL5054H, CTL5055H.
- Upon successful completion of the emphasis requirements and the successful completion of the degree requirements, students may make a request to the C&P Program Administrator to have the emphasis noted on the student transcript. This request must be made before graduation. A course can only be applied to the requirements of a single emphasis.

Digital Technologies in Education

Participating Programs:

- Curriculum and Pedagogy MA
- Curriculum and Pedagogy MEd General Program (No Field)
- Curriculum and Pedagogy PhD

The emphasis in Digital Technologies in Education engages educators in an examination of technology and its effective use in educational contexts. Drawing on research from the fields of the learning sciences, psychology, diversity studies, and information and communication technology, learners will deepen their understanding of such topics as knowledge-building, computational thinking, gamification of learning, online knowledge communities, social media, immersive technologies (virtual reality, augmented reality), technology and assessment, and mobile learning.

- **Coursework.** From the following course list, MA, MEd, and PhD students must successfully complete **1.5 full-course equivalents (FCEs)**, which are counted towards the total FCEs required for the student's degree program:

    - CTL1602H, CTL1603H, CTL1606H, CTL1608H, CTL1609H, CTL1615H, CTL1616H, CTL1617H, CTL1620H, CTL1621H, CTL1622H, CTL1623H, CTL1624H, CTL1625H, CTL1926H, CTL5011H, CTL5038H.
- Upon successful completion of the emphasis requirements and the successful completion of the degree requirements, students may make a request to the C&P Program Administrator to have the emphasis noted on the student transcript. This request must be made before graduation. A course can only be applied to the requirements of a single emphasis.

Indigenous Education and Decolonization

Participating Programs:

- Curriculum and Pedagogy MA
- Curriculum and Pedagogy MEd General Program (No Field)
- Curriculum and Pedagogy PhD

The emphasis in Indigenous Education and Decolonization not only examines the complex and tangled histories of those on whose traditional lands OISE/University of Toronto is situated — the Ouendat (Wyandot-Huron), Onondowahgah (Seneca-) and the Misi-zaagiing (Mississaugas-Anishinaabek) nations — but also extends to lands across Turtle Island and Abya-Yala. Tkaronto, as a starting place to understand Indigenous Education and Decolonization more globally, is subject to the *Dish With One Spoon Wampum Belt Covenant*, an agreement between the Hodenosaunee and the Anishinaabe and allied nations to peaceably share and care for the resources around the Great Lakes regions.

This emphasis will provide an entry point into the knowledge systems that emerge from this particular land, with an emphasis on land itself as a teacher and a source of knowledge. The emphasis will be grounded on a decolonial pedagogy, with a commitment to anti-colonization and decolonization practices. Recognizing that these lands have existed, and still do exist, first and foremost in relationship to Indigenous people requires a critical consciousness and acknowledgement of whose traditional lands we are now on as well as the historical and contemporary realities of those relationships. It is this understanding that forms the philosophical foundation upon which all of our courses position themselves within the emphasis.

- **Coursework.** From the following course list, MA, MEd, and PhD students must successfully complete **1.5 full-course equivalents (FCEs)**, which are counted towards the total FCEs required for the student's degree program:
    - CTL1063H, CTL1110H, CTL1320H, CTL1321H, CTL1322H, CTL1331H, CTL1332H, CTL5039H, CTL5049H, CTL5050H, CTL5053H, CTL5054H, CTL5056H, CTL5058H.
- Upon successful completion of the emphasis requirements and the successful completion of the degree requirements, students may make a request to the C&P Program Administrator to have the emphasis noted on the student transcript. This request must be made before graduation. A course can only be applied to the requirements of a single emphasis.

Science, Mathematics and Technology

Participating Programs:

- Curriculum and Pedagogy MA
- Curriculum and Pedagogy MEd General Program (No Field)
- Curriculum and Pedagogy PhD

The emphasis in Science, Mathematics and Technology (SMT) is dedicated to exploring theory, practice, and contemporary issues pertaining to SMT education in diverse settings and contexts. They are a vibrant community of scholars and graduate students who thrive on collegiality, intellectual debate, critical analyses, and inquiry.

Drawing on research and practice, students will explore and critique SMT education while supporting research, curriculum development, teaching, and innovation. With strong connections to the SMT Centre, and the collaborative specialization in Engineering Education, students will engage deeply with topics such as science, technology engineering, and mathematics (STEM) education; SMT education in formal and informal settings; equity; inclusion; diversity; activism; and social and environmental justice.

- **Coursework.** From the following course list, MA, MEd, and PhD students must successfully complete **1.5 full-course equivalents (FCEs)**, which are counted towards the total FCEs required for the student's degree program:
    - CTL1119H, CTL1120H, CTL1202H, CTL1206H, CTL1207H, CTL1209H, CTL1214H, CTL1215H, CTL1217H, CTL1218H, CTL1219H, CTL1221H, CTL1222H, CTL1224H, CTL1225H, CTL1602H, CTL1606H, CTL1608H, CTL1609H, CTL1621H, CTL1841H, CTL1926H, CTL5043H, CTL5044H, CTL5061H, CTL5062H, CTL5063H.
- Upon successful completion of the emphasis requirements and the successful completion of the degree requirements, students may make a request to the C&P Program Administrator to have the emphasis noted on the student transcript. This request must be made before graduation. A course can only be applied to the requirements of a single emphasis.

Wellbeing

Participating Programs:

- Curriculum and Pedagogy MA
- Curriculum and Pedagogy MEd General Program (No Field)
- Curriculum and Pedagogy PhD

The purpose of education should be to move people toward improved connectedness and happiness, as well as to further accomplish and to develop greater opportunities for growth. The emphasis in Wellbeing provides hope and healing for individuals and society through innovative educational experiences by helping people deal well and wisely with issues in their lives and times. The mission is to provide critical educational experiences that awaken the best in the human spirit by addressing issues of public concern.

Critical issues investigated through coursework may be related to mental health, environmental issues, and destructive ethnocentric patterns of behaviour, as well as the wise and ethical use of technology. In addition, strategies for managing anxiety and depression, and for raising awareness of inequitable and discriminatory conditions are similar across differing contexts. Therefore, one must examine one's own life and circumstances and larger societal and institutional contexts before taking informed action for the greater good of all people.

The goal is agency through self-advocacy and advocacy for others. Through this process, one does not merely deconstruct but also reconstructs through learning about how one's belief structures and patterns may become more beneficial to oneself and to those around. More specifically, these holistic approaches involve various forms such as narrative/biography, phenomenology, meditation, mindfulness practice, body work, mental health, and conscious use of technology.

- **Coursework.** From the following course list, MA, MEd, and PhD students must successfully complete **1.5 full-course equivalents (FCEs)**, which are counted towards the total FCEs required for the student's degree program:
  - CTL1016H, CTL1027H, CTL1106H, CTL1110H, CTL1121H, CTL1319H, CTL1331H, CTL1424H, CTL1809H, CTL1817H, CTL1825H, CTL3037H, CTL5011H, CTL5021H, CTL5042H, CTL5060H, CTL5717H.
- Upon successful completion of the emphasis requirements and the successful completion of the degree requirements, students may make a request to the CSTD Program Administrator to have the emphasis noted on the student transcript. This request must be made before graduation. A course can only be applied to the requirements of a single emphasis.

CTL: Curriculum and Pedagogy MA, MEd, PhD Courses

Not all courses are offered every year. Please review the course schedule on the Registrar's Office and Student Experience website.

Master's Level

Course Code	Course Title
CTL1000H	Foundations of Curriculum & Pedagogy / Les fondements du curriculum et de la pédagogie
CTL1001H	Values and Schooling
CTL1005H	Language, Literacy, and the School Curriculum
CTL1011H	Anti-Oppression Education in School Settings / L'éducation pour l'anti-oppression en milieu scolaire
CTL1016H	Cooperative Learning Research and Practice
CTL1018H	Introduction to Qualitative Inquiry in Curriculum, Teaching, and Learning
CTL1023H	Technology and Education: Critical Perspectives on Theory and Practice
CTL1024H	Poststructuralism and Education
CTL1026H	Performed Ethnography
CTL1027H	Facilitating Reflective Professional Development
CTL1031H	Language, Culture, and Identity: Using the Literary Text in Teacher Development
CTL1036H	Thoughtful Teaching and Practitioner Inquiry
CTL1037H	Teacher Development: Comparative and Cross-Cultural Perspectives
CTL1041H	Research Methods In Education
CTL1042H	Instrument Development in Education
CTL1043H	Research Issues in Alternative Assessments
CTL1045H	Survey Research
CTL1046H	Training Evaluation
CTL1047H	Course Self-Assessment
CTL1048H	Qualitative Methodology: Challenges and Innovations
CTL1049H	Critical Practitioner Research in Education
CTL1060H	Education and Social Development
CTL1062H	Performed Ethnography and Research Informed Theatre
CTL1063H	Pedagogies of Solidarity
CTL1064H	Applied Theatre and Performance in Sites of Learning
CTL1065H	Gender, Sexuality, and Schooling
CTL1099H	Critical Approaches to Arts-Based Research
CTL1100H	Arts in Urban Schools
CTL1104H	Play, Drama, and Arts Education
CTL1106H	Spirituality in Education
CTL1110H	The Holistic Curriculum
CTL1117H	Liberatory Practices in Drama and Education
CTL1119H	Gaining Confidence in Mathematics: A Holistic Approach to Rebuilding Math Knowledge and Overcoming Anxiety
CTL1120H	Effective Teaching Strategies in Elementary Mathematics Education: Research and Practice

Course Code	Course Title
CTL1121H	Foundations of Wellness Through a Phenomenology of Practice
CTL1122H	Exploring the Praxis of Environmental and Sustainability Education
CTL1200H	Science in the School Curriculum
CTL1202H	Mathematics in the School Curriculum: Elementary
CTL1206H	Teaching and Learning Science
CTL1207H	Teaching and Learning about Science: Issues and Strategies in Science, Technology, Society, and Environment (STSE) Education
CTL1208H	Curriculum Issues in Science and Technology: An Historical Perspective
CTL1209H	Current Issues in Science and Technology Education
CTL1211H	Action Research in Science, Mathematics, and Technology Education
CTL1214H	Equity Issues in Science Education
CTL1215H	Teaching and Learning About Science and Technology: Beyond Schools
CTL1217H	Integrating Science, Mathematics, and Technology Curricula
CTL1218H	Culture and Cognition in Mathematics, Science, and Technology Education
CTL1219H	Making Secondary Mathematics Meaningful
CTL1220H	Sociocultural Theories of Learning
CTL1221H	Education for Human Goals Local and Global: How's Science Education Helping?
CTL1222H	Environmental Studies in Science, Mathematics, and Technology Education
CTL1224H	Curriculum Issues in Science Education
CTL1225H	Mathematics Education: Linking Research and Practice
CTL1226H	AI Ethics in Education
CTL1304H	Cultural Studies and Education
CTL1306H	Qualitative Research Methods in Education: Concepts and Methods / La recherche qualitative en éducation: bases théoriques et pratiques
CTL1307H	Identity Construction and Education of Minorities / Identité collective et éducation minoritaire de langue française
CTL1309H	Les stéréotypes sexuels dans les programmes scolaires

Course Code	Course Title
CTL1312H	Democratic Citizenship Education: Comparative International Perspectives
CTL1313H	Gender Equity in the Classroom
CTL1316H	Global Education: Theory and Practice
CTL1318H	Teaching Conflict and Conflict Resolution
CTL1319H	Religious Education: Comparative and International Perspectives
CTL1320H	Introduction to Indigenous Land-centered Education: Historical and Contemporary Perspectives
CTL1321H	Indigenous Civilizations of Turtle Island: Language, Culture, and Identity
CTL1322H	Literacies of Land: Narrative, Storying, and Literature
CTL1325H	Citizenship Education, Pedagogy, and School Communities
CTL1330H	Education and Peacebuilding in Conflict Zones: International Comparative Perspectives
CTL1331H	Land-Centred Approaches to Research and Community Engagement
CTL1332H	Introduction to Decolonization in Education
CTL1333H	Settler Colonialism and Pedagogies of Liberation
CTL1334H	Indigenous Maternal Pedagogies: Teaching for Reconciliation
CTL1350H	Exploring Children's and Youth's Digital Literacies in a Networked World
CTL1400H	Classroom Adaptations and Instructional Strategies
CTL1403H	Special Education and Social Representation of Difference
CTL1406H	The Origins of Modern Schooling: Issues in the Development of the North American Educational System
CTL1407H	Rural Education and Social Reform in Canadian History, 1860–1960
CTL1424H	Religion, Ideology, and Social Movement in the Development of North American Education
CTL1426H	The History of Gender and Education in Canada
CTL1427H	Commemorating Canada, 1800s–1900s
CTL1428H	Immigration and the Development of Canadian Education
CTL1429H	Ethnicity and the Development of Canadian Education

Course Code	Course Title
CTL1430H	Gendered Colonialisms, Imperialisms, and Nationalisms in History
CTL1448H	Popular Culture and the Social History of Education II
CTL1454H	The Battle Over History Education in Canada
CTL1602H	Introduction to Computers in Education
CTL1603H	Introduction to Knowledge Building
CTL1604H	Video/Multimedia Design
CTL1606H	Computers in the Curriculum
CTL1608H	The Design of Online Environments: Theory and Practice
CTL1609H	Perspectives on the Development of Computer-Mediated Communication in Education
CTL1611H	Computer-Mediated Distance Education
CTL1612H	The Virtual Library
CTL1615H	Introduction to AI in Education
CTL1616H	Blended Learning: Issues and Applications
CTL1617H	Social Media and Education
CTL1620H	Foundations of Online Teaching and Learning
CTL1621H	Design and Development of Online Content, Media, and Artifacts
CTL1622H	Data Gathering and Assessment in Online Courses
CTL1623H	Immersive Technology in Education
CTL1624H	Instructional Design: Beyond the Lecture
CTL1625H	Digital Media and Practices for a Knowledge Society
CTL1797H	Practicum in Curriculum & Pedagogy: Master's Level
CTL1798H	Individual Reading and Research in Curriculum & Pedagogy: Master's Level
CTL5000H	Special Topics in C&P: Master's Level
CTL5001H to CTL5002H	Special Topics in Curriculum: Master's Level
CTL5010H to CTL5070H	Special Topics in Curriculum: Master's Level
CTL5700H to CTL5734H	Special Topics in Teaching

Doctoral Level

Course Code	Course Title
CTL1808H	Curriculum Innovation in Teacher Education
CTL1809H	Narrative and Story in Research and Professional Practice (RM)
CTL1811H	Writing Research/Research Writing: Moving from Idea to Reality
CTL1817H	Current Issues in Teacher Education
CTL1818H	Arts in Education: Concepts, Contexts, and Frameworks
CTL1822H	Urban School Research: Youth, Pedagogy, and the Arts
CTL1825H	The Teacher as a Contemplative Practitioner
CTL1841H	Research Seminar in Science, Mathematics, and Technology Education
CTL1844H	Seminar in Evaluation Problems
CTL1899H	C&P Doctoral Proseminar in Curriculum & Pedagogy
CTL1926H	Knowledge Media and Learning
CTL1998H	Individual Reading and Research in Curriculum & Pedagogy: Doctoral Level
CTL1998Y	Individual Reading and Research in Curriculum & Pedagogy: Doctoral Level
CTL6000H to CTL6015H	Special Topics in Curriculum: Doctoral Level

CTL: Language and Literacies Education MA, MEd, PhD Courses

Not all courses are offered every year. Please review the course schedule on the Registrar's Office and Student Experience website.

Master's Level

Course Code	Course Title
APD1251H	Reading in a Second Language
APD1296H	Assessing School-Aged Language Learners
CTL3000H	Foundations of Bilingual and Multicultural Education
CTL3001H	Research Colloquium in Language and Literacies Education

Course Code	Course Title
CTL3002H	Second Language Teaching Methodologies
CTL3003H	Planning and Organizing the Second Language Curriculum
CTL3004H	Language Awareness and its Role in Teacher Development
CTL3007H	Discourse Analysis
CTL3008H	Critical Pedagogy, Language, and Cultural Diversity
CTL3010H	Second Language Learning
CTL3011H	Cognitive, Sociolinguistic, and Sociopolitical Orientations in Bilingual Education Research
CTL3013H	Language Assessment
CTL3015H	Language and Literacies Education in Multilingual Contexts
CTL3018H	Language Planning and Policy
CTL3020H	Writing in a Second Language
CTL3024H	Language Teacher Education
CTL3025H	Educational Sociolinguistics
CTL3026H	Pragmatics in Language Education
CTL3028H	Literacy in Elementary Education
CTL3029H	Children's Literature as a Foundation of Literate Behaviour Across the Curriculum
CTL3030H	Theory and Practice in Elementary Literacy Instruction
CTL3031H	Children's Literature Within a Multicultural Context
CTL3032H	Teaching Writing in the Classroom
CTL3033H	Literary Research Methodologies
CTL3034H	New Literacies: Making Multiple Meanings
CTL3035H	Critical Literacy in Action
CTL3036H	Expressive Writing: Practice and Pedagogy
CTL3037H	Biography in Educational Contexts
CTL3038H	Play, Language, and Literacy in Primary Classrooms
CTL3039H	Academic English Research and Acquisition
CTL3040H	The Education of Students of Refugee Background in Canada and Beyond
CTL3041H	Theories in Vocabulary Teaching and Learning
CTL3042H	Complexity Theories and Language Education
CTL3100H	Communication and Second Language Learning in the Workplace
CTL3101H	Language Awareness for Language Educators
CTL3200H	Analyse du discours
CTL3201H	Bilinguisme et éducation
CTL3202H	Politique et aménagement linguistique
CTL3203H	Les approches pédagogiques plurilingues et pluriculturelles en éducation
CTL3204H	L'immersion française: enseignement et recherches / French Immersion: Teaching and Research
CTL3410H	Schooling in the Movies: Education as Reflected in Hollywood Films
CTL3411H	Cinema and Historical Literacy
CTL3412H	Shakespeare and Cultural Literacy
CTL3413H	Reading Cinema and Cultural Identity
CTL3414H	Historical Literacy and Popular Literacy
CTL3796H	LLE Practicum for MEd Field in Language Teaching
CTL3797H	Practicum in Language and Literacies Education: Master's Level
CTL3798H	Individual Reading and Research in Language and Literacies Education: Master's Level
CTL3811H	Critical Perspectives on Language, Racism, and Settler-Colonialism
CTL3899H	Proseminar in Language and Literacies Education Program: Master's Level
CTL5300H to CTL5320H	Special Topics in Language and Literacies Education Program: Master's Level
CRE1001H	Séminaire d'études : Éducation, francophonies et diversité
JTE1952H	Language, Culture, and Education

Doctoral Level

Course Code	Course Title
CTL3805H	Multilingualism and Plurilingualism
CTL3806H	Sociocultural Theory and Second Language Learning
CTL3807H	Second Language Education Research Methods (RM)
CTL3808H	The Role of Instruction in Second Language Acquisition
CTL3899H	Proseminar in Language and Literacies Education

Course Code	Course Title
CTL3998H	Individual Reading and Research in Language and Literacies Education: Doctoral Level
CTL3999H	Special Topics in Language and Literacies Education: Doctoral Level
CTL6300H to CTL6310H	Special Topics in Language and Literacies Education Program: Doctoral Level

CTL: Teaching MT Courses

Primary/Junior Division (Junior Kindergarten to Grade 6)

Core Courses

Course Code	Course Title
CTL7000H	Curriculum and Teaching in Literacy
CTL7001H	Educational Professionalism, Ethics, and Law
CTL7002H	Curriculum and Teaching in Mathematics
CTL7006H	Educational Research 1
CTL7008H	Introduction to Special Education and Mental Health
CTL7009H	Anti-Discriminatory Education
CTL7011H	Child and Adolescent Development and Learning
CTL7014H	Fundamentals of Teaching and Learning
CTL7015H	Educational Research 2
CTL7016H	Integrating Technology into the Classroom: Issues and Activities
CTL7018H	Curriculum and Teaching in Science and Environmental Education
CTL7019H	Supporting English Language Learners
CTL7072H	Curriculum and Teaching in Social Studies and Indigenous Education
CTL7080H	Practice Teaching Year 1 (Part 1)
CTL7081H	Practice Teaching Year 1 (Part 2)
CTL7082H	Practice Teaching Year 2 (Part 1)
CTL7083H	Practice Teaching Year 2 (Part 2)
CTL7084H	Issues in Numeracy
CTL7085H	Issues in Literacy
CTL7086H	Curriculum and Teaching in Music and Dance
CTL7087H	Curriculum and Teaching in Drama and Dance
CTL7088H	Curriculum and Teaching in Visual Arts
CTL7089H	Curriculum and Teaching in Physical Education
CTL7100H	Mathematics Concepts for Elementary Teacher Candidates
CTL7200H	Curriculum and Teaching in French as a Second Language — Primary/Junior

Junior/Intermediate Division (Grade 4 to Grade 10)

Core Courses

Course Code	Course Title
CTL7000H	Curriculum and Teaching in Literacy
CTL7001H	Educational Professionalism, Ethics, and Law
CTL7002H	Curriculum and Teaching in Mathematics
CTL7006H	Educational Research 1
CTL7008H	Introduction to Special Education and Mental Health
CTL7009H	Anti-Discriminatory Education
CTL7011H	Child and Adolescent Development and Learning
CTL7013H	Arts in Education
CTL7014H	Fundamentals of Teaching and Learning
CTL7015H	Educational Research 2
CTL7016H	Integrating Technology into the Classroom: Issues and Activities
CTL7018H	Curriculum and Teaching in Science and Environmental Education
CTL7019H	Supporting English Language Learners
CTL7072H	Curriculum and Teaching in Social Studies and Indigenous Education
CTL7080H	Practice Teaching Year 1 (Part 1)
CTL7081H	Practice Teaching Year 1 (Part 2)
CTL7084H	Issues in Numeracy
CTL7085H	Issues in Literacy
CTL7100H	Mathematics Concepts for Elementary Teacher Candidates*

Intermediate Subject Specialization Courses for Junior/Intermediate Division Certification

Course Code	Course Title
CTL7050H	Intermediate Teaching Subject — English (First Language)
CTL7051H	Intermediate Teaching Subject — French (Second Language)
CTL7052H	Intermediate Teaching Subject — Geography
CTL7053H	Intermediate Teaching Subject — Health and Physical Education
CTL7054H	Intermediate Teaching Subject — History
CTL7055H	Intermediate Teaching Subject — Mathematics
CTL7056H	Intermediate Teaching Subject — Music-Instrumental
CTL7057H	Intermediate Teaching Subject — Music-Vocal
CTL7058H	Intermediate Teaching Subject — Science-General
CTL7059H	Intermediate Teaching Subject — Visual Arts
CTL7060H	Intermediate Teaching Subject — Drama

Intermediate/Senior Division (Grade 7 to Grade 12)

Core Courses

Course Code	Course Title
CTL7006H	Educational Research 1
CTL7007H	Authentic Assessment
CTL7008H	Introduction to Special Education and Mental Health
CTL7009H	Anti-Discriminatory Education
CTL7011H	Child and Adolescent Development and Learning
CTL7014H	Fundamentals of Teaching and Learning
CTL7015H	Educational Research 2
CTL7016H	Integrating Technology into the Classroom: Issues and Activities
CTL7019H	Supporting English Language Learners
CTL7070H	Sustainability Education: Issues and Practice
CTL7073H	Indigenous Experiences of Racism and Settler Colonialism in Canada: An Introduction
CTL7074H	Issues in Educational Law, Policy, and Ethics
CTL7080H	Practice Teaching Year 1 (Part 1)
CTL7081H	Practice Teaching Year 1 (Part 2)
CTL7090Y	Practice Teaching Year 2

Intermediate/Senior Specialization Courses

Course Code	Course Title
CTL7020Y	Curriculum and Teaching in English — Intermediate/Senior
CTL7021Y	Curriculum and Teaching in History — Intermediate/Senior
CTL7022Y	Curriculum and Teaching in Mathematics — Intermediate/Senior
CTL7023Y	Curriculum and Teaching in Science: Biology — Intermediate/Senior
CTL7024Y	Curriculum and Teaching in Science: Chemistry — Intermediate/Senior
CTL7025Y	Curriculum and Teaching in Science: Physics — Intermediate/Senior
CTL7026Y	Curriculum and Teaching in Science: General
CTL7027Y	Curriculum and Teaching in Social Science: General — Intermediate/Senior
CTL7028Y	Curriculum and Teaching in Geography — Intermediate/Senior
CTL7029Y	Curriculum and Teaching in Music: Instrumental — Intermediate/Senior
CTL7030Y	Curriculum and Teaching in Music: Vocal
CTL7031Y	Curriculum and Teaching in Health and Physical Education
CTL7032Y	Curriculum and Teaching in Visual Arts — Intermediate/Secondary
CTL7033Y	Curriculum and Teaching in Dramatic Arts — Intermediate/Secondary
CTL7034Y	Curriculum and Teaching in French as a Second Language — Intermediate/Secondary
CTL7035Y	Curriculum and Teaching in Business Studies: General — Intermediate/Secondary
CTL7036Y	Curriculum and Teaching in Business Studies: Accounting — Intermediate/Secondary
CTL7041Y	Curriculum and Teaching in Religious Education (Catholic Schools) — Intermediate/Senior

Dentistry

Dentistry: Introduction

Faculty Affiliation

Dentistry

Degree Programs

Dentistry

MSc and PhD

- Fields:
  - Dental Anaesthesia;
  - Dental Biomedical Sciences (this field is taken by MSc and PhD students who are not in a specialty);
  - Dental Public Health;
  - Endodontics;
  - Oral and Maxillofacial Pathology;
  - Oral and Maxillofacial Pathology and Oral Medicine;
  - Oral and Maxillofacial Radiology;
  - Oral and Maxillofacial Surgery;
  - Oral Medicine;
  - Orthodontics and Dentofacial Orthopedics;
  - Pediatric Dentistry;
  - Periodontics;
  - Prosthodontics

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Aging, Palliative and Supportive Care Across the Life Course**
  - Dentistry, MSc, PhD
- **Biomedical Engineering** (admissions have been administratively suspended)
  - Dentistry, MSc, PhD
- **Global Health (U of T Global Scholar)**
  - Dentistry, MSc (thesis only), PhD
- **Musculoskeletal Sciences**
  - Dentistry, MSc, PhD
- **Neuroscience**
  - Dentistry, MSc, PhD
- **Women's Health**
  - Dentistry, MSc, PhD

Overview

The Faculty of Dentistry offers graduate programs leading to either a **Master of Science** or **Doctor of Philosophy** degree. These graduate programs appeal to:

- applicants, both dentists and non-dentists, who wish to pursue graduate research training; and
- applicants who have a degree in dentistry and who are pursuing research training and advanced clinical education in one of the dental specialties (also known as fields).

Consequently, both the MSc and the PhD degrees have a common core of coursework, with each having varying additional research and clinical training requirements (if applicable).

The Dentistry MSc program develops students' scholarly skills and critical thoughts, and is intended for those whose career goal is to achieve mastery of a field in oral health science, employment in a research environment, or clinical specialty practice (if applicable). The MSc in Dentistry can be completed through the following options: 1) thesis in the field of Dental Biomedical Sciences, 2) thesis with dental specialty, or 3) coursework only with dental specialty.

The Dentistry PhD program is intended for those whose career goal is to work at the forefront of their field in oral health sciences as an independent research scientist or clinician-scientist in an academic, governmental, or industrial setting. This thesis-based program can be completed with or without a dental specialty, and on a full-time basis only.

Contact and Address

Web: www.dentistry.utoronto.ca
Email: gradstudies@dentistry.utoronto.ca
Telephone: (416) 864-8114
Fax: (416) 979-4944

Faculty of Dentistry, Student Services Office
University of Toronto
Room 104, 124 Edward Street
Toronto, Ontario M5G 1G6 Canada

Dentistry: Graduate Faculty

Full Members

Agur, Anne - BSc, MSc, PhD
Aubin, Jane - BSc, PhD
Avivi-Arber, Limor - MSc, DMD, BMedSc, PhD
Azarpazhooh, Amir - MSc, DDS, PhD
Bozec, Laurent - BSc, PhD
Bressmann, Tim - MPH, PhD
Carneiro, Karina - BSc, PhD
Casas, Michael - MSc, DDS
Cioffi, Iacopo - DDS, PhD
Cvitkovitch, Dennis - BSc, MSc, PhD
Davies, John - BSc, BDSc, PhD, DSc
Dempster, Laura - BScD, MSc, PhD
Deporter, Douglas - DipPerio, DDS, PhD
Dos Santos, Paulo Henrique - MSc, DDS
Dostrovsky, Jonathan - BSc, MSc, PhD
Finer, Yoav - MSc, MSc, DMD, PhD
Friedman, Shimon - DMD
Ganss, Bernhard - BSc, MSc, DrRerNat
Glogauer, Michael - DDS, PhD

Gong, Siew-Ging - MA, MScD, BDS, PhD
Grynpas, Marc - MSc, PhD
Haas, Daniel - BSc, BScD, DDS, PhD
Hinz, Boris - PhD
Kenny, David - BSc, DDS
Kishen, Anil - BDS, MDS, PhD ***(Associate Dean, Graduate Education)***
Lam, Ernest - BSc, MSc, DMD, PhD
Lawrence, Herenia - MSc, DDS, PhD
Levesque, Celine - BSc, MSc, PhD
Magalhaes, Marco - MSc, BDS, PhD
Manolson, Morris - BS, PhD ***(Vice-Dean, Research)***
McCulloch, Christopher - BSc, DDS, PhD
Moayedi, Massieh - BSc, PhD
Moriarty, Tara - BA, BSc, PhD
Prakki, Anuradha - MSc, DDS, PhD
Quinonez, Carlos R. - MSc, DMD, PhD
Santerre, Paul - BSc, MSc, PhD
Sessle, Barry - BS, MDS, BDS, PhD
Seth, Arun - MS, PhD
Sherman, Philip - MD
Shrestha, Annie - MSc, BDS, PhD
Simmons, Craig - BSc, MSc, PhD
Sone, Eli - BSc, MS, PhD
Tenenbaum, Howard - DipPerio, DDS, PhD

Members Emeriti

Fenton, Aaron - DipPerio, MS, DDS
Mock, David - DDS, PhD, FRCDC
Pilliar, Robert - BASc, PhD
Ross, Robert Bruce - MSc, DDS, FRCD
Watson, Philip - DDS, BDSc, MScD
Zarb, George - BScD, MS, DDS

Associate Members

Andrews, Paul - BSc, MSc, DDS
Barrett, Edward - BSc, MSc, DDS
Basrani, Bettina - PhD
Blanas, Nick - DDS
Bradley, Grace - MSc, DDS
Caminiti, Marco - BSc, MEd, DDS
Cassim, Nashat - BSc, DDS
Cherkas, Pavel - BSc, DMD, MSD, PhD
Chugh, Deepika - BS, DDS
Chvartszaid, David - MSc, MSc, DDS
Cuddy, Karl - BSc, MSc, DDS, MD
Daskalogiannakis, I. John - DipOrH, MSc, DDS
Dosani, Fehmida - BS, DDS
Franco Echevarria, Maria - DMD
Goldberg, Michael - DipPerio, BSc, MSc, DDS
Iglar, Karl - MD
Kulkarni, Gajanan - LLB, MSc, BDS, PhD
Lai, Jim Yuan - BSc, MSc, DMD, FRCDC ***(Vice-Dean, Education)***
Lanca, Jose - MD, PhD
Laporte, Audrey - BA, MA, PhD
Leong, Iona - BSc, MSc, BDS
Malkhassian, Gevik - MSc, DDS
Nainar, Hashim - BDS, MScD
Nargaski, Natoosha - BS, MS, DDS
Nkansah, Peter - BSc, MSc, DDS
Oxner, Jill - BSc, DDS, MScD
Perschbacher, Susanne - DDS
Pharoah, Michael - BSc, MSc, DDS
Sectakof, Pavel - DDS
Somogyi-Ganss, Eszter - MSc, DMD, PhD
Suri, Sunjay - BDS, MDS
Sutherland, Susan - BScN, MSc, DDS
Tam, Laura - BSc, MSc, DDS ***(Interim Dean)***
Tenn-Lyn, Nicole - BSc, MEd, MD
Thang, Trevor - MS, DDS
Tompson, Bryan - DipOrH, DDS
Wong, Michelle - DDS, MScD, EdD
Yarascavitch, Carilynne - BSc, MSc, DDS

Dentistry: Dentistry MSc; Field: Dental Biomedical Sciences

The Dentistry MSc program, Dental Biomedical Sciences field develops students' scholarly and critical thinking skills, and is intended for those whose career goal is to achieve mastery of a field in oral health science or employment in a research environment. The program length is six sessions, with most students taking two years to complete the requirements.

A part-time option is also available. Part-time students complete the same program requirements over an extended period of time (usually 12 sessions). Note: part-time students are ineligible to transfer to the PhD field in Dental Biomedical Sciences.

Additionally, MSc students in the field of Dental Biomedical Sciences are ineligible to transfer to a PhD program with a dental specialty.

Thesis-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- An appropriate BSc, Doctor of Dental Surgery (DDS), or an equivalent degree, with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **3.0 full-course equivalents (FCEs)** and a **thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
    - An additional 1.0 elective FCE.
  - **Years 1 and 2**:
    - DEN1001H *Graduate Research Dissemination Seminars*
  - **Year 2:**
    - Research, thesis completion, and oral defence of the written thesis.

- **Residency.** Ordinarily, one year of full-time registration; however, it is the Faculty of Dentistry's expectation that students will normally remain in full-time attendance on campus to enable full participation in departmental activities for two years.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 12 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Dentistry: Dentistry MSc; Specialty: Dental Anaesthesia

The Dentistry MSc, Dental Anaesthesia specialty is a three-year full-time program. The specialty in Dental Anaesthesia is designed to prepare dentists with a full range of sedation and anaesthetic techniques for dental patients with the focus on deep sedation and general anaesthesia. The teaching facilities for this program are provided by the combined resources of Dental Anaesthesia in the Faculty of Dentistry and the Department of Anaesthesia in the Temerty Faculty of Medicine. Training is given both at the Faculty of Dentistry and at teaching hospitals associated with the University.

Upon completion of all program requirements, students are eligible for the MSc degree and certification in the chosen dental specialty. Note: coursework-only students are ineligible to enrol in the PhD in Dentistry program at a later date.

Thesis-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Dental Anaesthesia**, complete **15.5 required FCEs** as follows. Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - **Year 1**:
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1055H *Basic Principles of Anaesthesia*
    - DEN1056Y *Basic Concepts in Clinical Medicine*
    - DEN1073Y *Dental Anaesthesia Graduate Seminars*
    - DEN1074Y *Foundations of Medicine as Applied to Dental Anaesthesia*
    - DEN1076H *General Anaesthesia for Medical Procedures — Adult I*
    - DEN1078H *General Anaesthesia for Dental Procedures — Adult I*
    - DEN1084H *Experiences in Clinical Teaching I*
    - DEN1087Y *Fundamentals of Dental Anaesthesia*
    - Begin **thesis research**
  - **Year 2:**
    - DEN1052Y *General Anaesthesia for Medical Procedures — Pediatric*
    - DEN1071H *Medical Anaesthesia Seminars* I
    - DEN1083Y *Experiences in Clinical Medicine*
    - DEN1085H *Experiences in Clinical Teaching II*
    - DEN1088Y *Fundamentals of Dental Anaesthesia II*
    - PDE9094Y *Clinical Conferences*
    - Continue with thesis research
  - **Year 3:**
    - DEN1072H *Medical Anaesthesia Seminars II*
    - DEN1075Y *General Anaesthesia for Dental Procedures — Pediatric*
    - DEN1077H *General Anaesthesia for Medical Procedures — Adult II*
    - DEN1079H *General Anaesthesia for Dental Procedures — Adult II*
    - DEN1086H *Experiences in Clinical Teaching III*
    - DEN1089Y *Fundamentals of Dental Anaesthesia II*
    - PDE9094Y *Clinical Conferences*
    - **Oral defence** of the written thesis.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 9 sessions full-time (typical registration sequence: FWS-FWS-FWS)
Time Limit: 4 years full-time

Coursework-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs)** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1001H *Graduate Research Dissemination Seminars.*
- In the **specialty of Dental Anaesthesia**, complete a total of **15.5 required FCEs, 2.0 elective FCEs, and a research practicum (0.5 FCE)** as follows. Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details
  - **Year 1:**
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1055H *Basic Principles of Anaesthesia*
    - DEN1056Y *Basic Concepts in Clinical Medicine*
    - DEN1073Y *Dental Anaesthesia Graduate Seminars*
    - DEN1074Y *Foundations of Medicine as Applied to Dental Anaesthesia*
    - DEN1076H *General Anaesthesia for Medical Procedures — Adult I*
    - DEN1078H *General Anaesthesia for Dental Procedures — Adult I*
    - DEN1084H *Experiences in Clinical Teaching I*
    - DEN1087Y *Fundamentals of Dental Anaesthesia*
    - 2.0 elective FCEs in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
  - **Year 2:**
    - DEN1052Y *General Anaesthesia for Medical Procedures — Pediatric*
    - DEN1071H *Medical Anaesthesia Seminars I*
    - DEN1083Y *Experiences in Clinical Medicine*
    - DEN1085H *Experiences in Clinical Teaching II*
    - DEN1088Y *Fundamentals of Dental Anaesthesia II*
    - PDE9094Y *Clinical Conferences*
  - **Year 3:**
    - DEN1072H *Medical Anaesthesia Seminars II*
    - DEN1075Y *General Anaesthesia for Dental Procedures — Pediatric*
    - DEN1077H *General Anaesthesia for Medical Procedures — Adult II*
    - DEN1079H *General Anaesthesia for Dental Procedures — Adult II*
    - DEN1086H *Experiences in Clinical Teaching III*
    - DEN1089Y *Fundamentals of Dental Anaesthesia III*
    - PDE9094Y *Clinical Conferences*
    - Prepare a **research practicum** (DEN1061H); successfully complete an **oral examination**.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 9 sessions full-time (typical registration sequence: FWS-FWS-FWS)
Time Limit: 4 years full-time

Dentistry: Dentistry MSc; Specialty: Dental Public Health

The Dentistry MSc, Dental Public Health specialty is a two-year program. The specialty in Dental Public Health consists of core subjects, with optional subjects chosen by students in consultation with the program director. Courses are given by the Faculty of Dentistry as well as other units, such as the Dalla Lana School of Public Health and the Institute of Health Policy, Management and Evaluation.

This program is offered both full-time and part-time. Part-time students have up to five years to complete all requirements. Note: part-time students are ineligible to transfer to the PhD in Dentistry program.

The coursework-only option of this specialty is also available to dental hygienists. Students in the coursework-only option are ineligible to transfer to the PhD in Dentistry program.

Upon completion of all program requirements, students are eligible for the MSc degree and certification in the chosen dental specialty.

Thesis-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 1 and 2:**
    - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Dental Public Health**, complete **7.0 required FCEs** as follows:
  - **Year 1:**
    - CHL5004H *Introduction to Public Health Sciences*
    - DEN1003H *Preventive Dentistry*
    - DEN1006Y *Seminars in Dental Public Health*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1051Y *Oral Epidemiology*
    - DEN1063Y *Practicum in Dental Public Health*
    - PDE9094Y *Clinical Conferences*

        - Begin **thesis research**
    - **Year 2:**
        - DEN1064H *Management Principles in Canadian Dental Health Organizations*
        - 0.5 FCE chosen in the area of health policy or health economics based on the student's clinical or research interests
        - 0.5 FCE chosen in the area of public health based on the student's clinical or research interests
        - **Oral defence** of the written thesis.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 12 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Coursework-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree, with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.
- Dental hygienist applicants must have a baccalaureate dental hygiene degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in their final year of study.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs)** as follows:
    - **Year 1:**
        - DEN1010H *Research Ethics*
        - DEN1015H *Introduction to Biostatistics*
        - DEN1101H *Introduction to Research Methods and Dissemination*
    - **Years 1 and 2:**
        - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Dental Public Health**, complete **7.0 required FCEs, 2.0 elective FCEs, and a research practicum (0.5 FCE)** as follows:
    - **Year 1:**
        - CHL5004H *Introduction to Public Health Sciences*
        - DEN1003H *Preventive Dentistry*
        - DEN1006Y *Seminars in Dental Public Health*
        - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
        - DEN1051Y *Oral Epidemiology*
        - DEN1063Y *Practicum in Dental Public Health*
        - PDE9094Y *Clinical Conferences*
        - 2.0 elective FCEs in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
    - **Year 2:**
        - DEN1064H *Management Principles in Canadian Dental Health Organizations*
        - 0.5 FCE chosen in the area of health policy or health economics based on the student's clinical or research interests
        - 0.5 FCE chosen in the area of public health based on the student's clinical or research interests
        - Prepare a **research practicum** (DEN1061H); successfully complete an **oral examination**.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 12 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Dentistry: Dentistry MSc; Specialty: Endodontics

The Dentistry MSc, Endodontics specialty is a three-year full-time program. The specialty in Endodontics is designed to provide students with opportunities to acquire excellent clinical skills and comprehension of the underlying biology. Its components include patient care, providing all aspects of endodontic treatment; topic-specific and current literature seminars; clinical conferences; core curriculum courses; rotation programs; research at the MSc level, including application for funding, preparation of manuscripts for publication, presentation at national and international research forums; and guest lectures.

Students must complete a dental clinic rotation as part of the Endodontics specialty requirements.

Students start the program in the Summer session. Upon completion of all program requirements, students are eligible for the MSc degree and certification in the chosen dental specialty.

Note: coursework-only students are ineligible to enrol in the PhD in Dentistry program at a later date.

Thesis-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Endodontics**, complete **18.0 required FCEs** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - **Year 1:**
    - DEN1002H *Oral Pathology*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1062H *Pharmacology of Dental Therapeutics*
    - DEN1070H *Advances in Dental Materials Science*
    - DEN1090H *Inhalation and Oral Minimal and Moderate Sedation for Dental Procedures*
    - DEN3005H *Head and Neck Anatomy*
    - DEN5005H *Introduction to Graduate Endodontics*
    - DEN5011Y *Graduate Endodontics Case Presentation I*
    - DEN5021Y *Graduate Endodontics Topical Literature I*
    - DEN5031Y *Endodontics Current Literature Seminar I*
    - DEN5091Y *Endodontic Clinic*
    - PDE9094Y *Clinical Conferences*
    - Begin **thesis research**
  - **Year 2:**
    - DEN1022H *Investigating Pathogenic Biofilms*
    - DEN1060H *Craniofacial Neurophysiology: Sensory, Pain, and Neuromuscular Functions*
    - DEN5004Y *Single Tooth Replacements with Implant-Supported Prosthesis*
    - DEN5012Y *Graduate Endodontics Case Presentation II*
    - DEN5022Y *Graduate Endodontics Topical Literature 2*
    - DEN5032Y *Endodontics Current Literature 2*
    - DEN5092Y *Endodontic Clinic 2*
    - PDE9094Y *Clinical Conferences*
    - Continue with thesis research
  - **Year 3:**
    - DEN5004Y *Single Tooth Replacements with Implant-Supported Prosthesis*
    - DEN5013Y *Graduate Endodontics Case Presentation III*
    - DEN5033Y *Endodontics Current Literature Seminar 3*
    - DEN5093Y *Endodontic Clinic 3*
    - **Oral defence of the thesis**.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 10 sessions full-time (typical registration sequence: S-FWS-FWS-FWS)
Time Limit: 4 years full-time

Coursework-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs)** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Endodontics**, complete **18.0 required FCEs, 2.0 elective FCEs, and a research practicum (0.5 FCE)** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - **Year 1:**
    - DEN1002H *Oral Pathology*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1062H *Pharmacology of Dental Therapeutics*
    - DEN1070H *Advances in Dental Materials Science*
    - DEN1090H *Inhalation and Oral Minimal and Moderate Sedation for Dental Procedures*
    - DEN3005H *Head and Neck Anatomy*
    - DEN5005H *Introduction to Graduate Endodontics*
    - DEN5011Y *Graduate Endodontics Case Presentation I*
    - DEN5021Y *Graduate Endodontics Topical Literature I*
    - DEN5031Y *Endodontics Current Literature Seminar 1*
    - DEN5091Y *Endodontic Clinic 1*
    - PDE9094Y *Clinical Conferences*
    - 2.0 elective FCEs in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice

- **Year 2:**
  - DEN1022H *Investigating Pathogenic Biofilms*
  - DEN1060H *Craniofacial Neurophysiology: Sensory, Pain, and Neuromuscular Functions*
  - DEN5004Y *Single Tooth Replacements with Implant-Supported Prosthesis*
  - DEN5012Y *Graduate Endodontics Case Presentation II*
  - DEN5022Y *Graduate Endodontics Topical Literature 2*
  - DEN5032Y *Graduate Endodontics Current Literature Seminar 2*
  - DEN5092Y *Endodontic Clinic 2*
  - PDE9094Y *Clinical Conferences*
- **Year 3:**
  - DEN5004Y *Single Tooth Replacements with Implant-Supported Prosthesis*
  - DEN5013Y *Graduate Endodontics Case Presentation III*
  - DEN5033Y *Endodontics Current Literature Seminar 3*
  - DEN5093Y *Endodontic Clinic III*
  - Prepare a **research practicum** (DEN1061H); successfully complete an **oral examination**.

- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 10 sessions full-time (typical registration sequence: S-FWS-FWS-FWS)
Time Limit: 4 years full-time

Dentistry: Dentistry MSc; Specialty: Oral and Maxillofacial Pathology

The Dentistry MSc, Oral and Maxillofacial Pathology specialty is a three-year full-time program. The specialty in Oral and Maxillofacial Pathology focuses on the identification and management of diseases of the oral and maxillofacial regions through microscopic, clinical, biochemical, or other forms of examination. Oral and Maxillofacial Pathology includes histopathologic analysis of tissue samples, the investigation of, causes, and effects of diseases.

Students start the program in the Summer session. Upon completion of all program requirements, students are eligible for the MSc degree and certification in the chosen dental specialty.

Note: coursework-only students are ineligible to enrol in the PhD in Dentistry program at a later date.

Thesis-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
  - **Year 2:**
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Oral and Maxillofacial Pathology**, complete **6.5 required FCEs** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  - **Year 1:**
    - LMP1300Y *General and Special Pathology*
    - Begin **thesis research**
  - **Year 2:**
    - DEN1002H *Oral Pathology*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1111Y *Advanced Oral and Maxillofacial Pathology I*
    - DEN1311Y *Oral Surgical Pathology*
    - Continue with thesis research
  - **Year 3:**
    - DEN1112Y *Advanced Oral and Maxillofacial Pathology II*
    - DEN1312Y *Advanced Oral Surgical Pathology I*
    - **Oral defence** of the written thesis.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 10 sessions full-time (typical registration sequence: S-FWS-FWS-FWS)
Time Limit: 4 years full-time

Coursework-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
  - **Year 2:**
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Oral and Maxillofacial Pathology**, complete **6.5 required FCEs, 2.0 elective FCEs, and a research practicum (0.5 FCE)** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  - **Year 1:**
    - LMP1300Y *General and Special Pathology*
    - 2.0 elective FCEs in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
  - **Year 2:**
    - DEN1002H *Oral Pathology*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1111Y *Advanced Oral and Maxillofacial Pathology I*
    - DEN1311Y *Oral Surgical Pathology*
  - **Year 3:**
    - DEN1112Y *Advanced Oral and Maxillofacial Pathology II*
    - DEN1312Y *Advanced Oral Surgical Pathology I*
    - Prepare a **research practicum** (DEN1061H); successfully complete an **oral examination**.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 10 sessions full-time (typical registration sequence: S-FWS-FWS-FWS)
Time Limit: 4 years full-time

Dentistry: Dentistry MSc; Specialty: Oral and Maxillofacial Pathology and Oral Medicine

The Dentistry MSc, Oral and Maxillofacial Pathology and Oral Medicine specialty is a four-year full-time program. The specialty in Oral and Maxillofacial Pathology and Oral Medicine is concerned with the diagnosis, nature, and primarily non-surgical management of oral, maxillofacial, and temporomandibular diseases and disorders, including dental management of patients with medical complications.

Students start the program in the Summer session. Upon completion of all program requirements, students are eligible for the MSc degree and certification in the chosen dental specialty.

Note: coursework-only students are ineligible to enrol in the PhD in Dentistry program at a later date.

Thesis-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 2:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 4:**
    - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Oral and Maxillofacial Pathology and Oral Medicine**, complete **11.5 FCEs** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  - **Year 1:**
    - LMP1300Y *General and Special Pathology*
    - Begin **thesis research**
  - **Year 2:**
    - DEN1002H *Oral Pathology*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1111Y *Advanced Oral and Maxillofacial Pathology I*
    - DEN1211Y *Oral Medicine I*
    - DEN1311Y *Oral Surgical Pathology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - Continue with thesis research
  - **Year 3:**
    - DEN1112Y *Advanced Oral and Maxillofacial Pathology II*
    - DEN1212Y *Oral Medicine II*
    - DEN1312Y *Advanced Oral Surgical Pathology I*
    - Continue with thesis research
  - **Year 4:**
    - DEN1113Y *Advanced Oral and Maxillofacial Pathology III*
    - DEN1213Y *Oral Medicine III*
    - DEN1313Y *Advanced Oral Surgical Pathology II*
    - **Oral defence** of the written thesis.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 13 sessions full-time (typical registration sequence: S-FWS-FWS-FWS-FWS)
Time Limit: 5 years full-time

Coursework-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs)** as follows:
  - **Year 2:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 4:**
    - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Oral and Maxillofacial Pathology and Oral Medicine**, complete **11.5 required FCEs, 2.0 elective FCEs, and a research practicum (0.5 FCE)** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  - **Year 1:**
  - LMP1300Y *General and Special Pathology*
  - 2.0 elective FCEs in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
  - **Year 2:**
    - DEN1002H *Oral Pathology*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1111Y *Advanced Oral and Maxillofacial Pathology I*
    - DEN1211Y *Oral Medicine I*
    - DEN1311Y *Oral Surgical Pathology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
  - **Year 3:**
    - DEN1112Y *Advanced Oral and Maxillofacial Pathology II*
    - DEN1212Y *Oral Medicine II*
    - DEN1312Y *Advanced Oral Surgical Pathology I*
  - **Year 4:**
    - DEN1113Y *Advanced Oral and Maxillofacial Pathology III*
    - DEN1213Y *Oral Medicine III*
    - DEN1313Y *Advanced Oral Surgical Pathology II*
    - Prepare a **research practicum** (DEN1061H); successfully complete an **oral examination**.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 13 sessions full-time (typical registration sequence: S-FWS-FWS-FWS-FWS)
Time Limit: 5 years full-time

Dentistry: Dentistry MSc; Specialty: Oral and Maxillofacial Radiology

The Dentistry MSc, Oral and Maxillofacial Radiology specialty is a three-year full-time program. The specialty in Oral and Maxillofacial Radiology is concerned with the prescription, production, and interpretation of diagnostic images of diseases and disorders of the craniofacial complex.

Upon completion of all program requirements, students are eligible for the MSc degree and certification in the chosen dental specialty. Note: coursework-only students are ineligible to enrol in the PhD in Dentistry program at a later date.

Thesis-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Year 2:**
    - DEN1015H *Introduction to Biostatistics*
  - **Years 2 and 3:**
    - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Oral and Maxillofacial Radiology**, complete **8.5 required FCEs** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty. Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - **Year 1:**
    - DEN1002H *Oral Pathology*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1017H *Temporomandibular Disorders*

        - DEN1094Y *Advanced Oral and Maxillofacial Radiology I*
        - DEN1311Y *Oral Surgical Pathology*
        - DEN3005H *Head and Neck Anatomy*
        - Begin **thesis research**
        - Mi Applied Physics modules taken through the Department of Medical Imaging in the Temerty Faculty of Medicine (0.0 FCE)
    - **Year 2:**
        - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
        - DEN1095Y *Advanced Oral and Maxillofacial Radiology II*
        - DEN1312Y *Advanced Oral Surgical Pathology I*
        - PDE9094Y *Clinical Conferences*
        - Mi Applied Physics modules taken through the Department of Medical Imaging in the Temerty Faculty of Medicine (0.0 FCE)
        - Clinical and Experimental Radiobiology modules taken through the Department of Radiation Oncology in the Temerty Faculty of Medicine (0.0 FCE)
        - Continue with thesis research
    - **Year 3:**
        - DEN1096Y *Advanced Oral and Maxillofacial Radiology III*
        - PDE9094Y *Clinical Conferences*
        - **Oral defence** of the written thesis.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 9 sessions full-time (typical registration sequence: FWS-FWS-FWS)
Time Limit: 4 years full-time

Coursework-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs)** as follows:
    - **Year 1:**
        - DEN1010H *Research Ethics*
        - DEN1101H *Introduction to Research Methods and Dissemination*
    - **Year 2:**
        - DEN1015H *Introduction to Biostatistics*
    - **Years 2 and 3:**
        - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Oral and Maxillofacial Radiology**, complete **8.5 required FCEs, 2.0 elective FCEs, and a research practicum (0.5 FCE)** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
    - **Year 1:**
        - DEN1002H *Oral Pathology*
        - DEN1007H *Oral and Maxillofacial Radiology*
        - DEN1017H *Temporomandibular Disorders*
        - DEN1094Y *Advanced Oral and Maxillofacial Radiology I*
        - DEN1311Y *Oral Surgical Pathology*
        - DEN3005H *Head and Neck Anatomy*
        - Mi Applied Physics modules taken through the Department of Medical Imaging in the Temerty Faculty of Medicine (0.0 FCE)
        - 2.0 elective FCEs in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
    - **Year 2:**
        - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
        - DEN1095Y *Advanced Oral and Maxillofacial Radiology II*
        - DEN1312Y *Advanced Oral Surgical Pathology I*
        - PDE9094Y *Clinical Conferences*
        - Mi Applied Physics modules taken through the Department of Medical Imaging in the Temerty Faculty of Medicine (0.0 FCE)
        - Clinical and Experimental Radiobiology modules taken through the Department of Radiation Oncology in the Temerty Faculty of Medicine (0.0 FCE)
    - **Year 3:**
        - DEN1096Y *Advanced Oral and Maxillofacial Radiology III*
        - PDE9094Y *Clinical Conferences*
        - Prepare a **research practicum** (DEN1061H); successfully complete an **oral examination**.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 9 sessions full-time (typical registration sequence: FWS-FWS-FWS)
Time Limit: 4 years full-time

Dentistry: Dentistry MSc; Specialty: Oral and Maxillofacial Surgery (Effective Summer 2024)

The Dentistry MSc, Oral and Maxillofacial Surgery specialty is a four-year full-time program. The specialty in Oral and Maxillofacial Surgery is concerned with and includes the diagnosis and surgical and adjunctive treatment of disorders, diseases, injuries, and defects, involving the functional and aesthetic aspects of the hard and soft tissues of the oral and maxillofacial regions and related structures. Clinical activities are based primarily at Mt. Sinai Hospital, Sunnybrook Health Sciences Centre, Humber River Hospital, and The Hospital for

Sick Children. There is also additional participation at other University-affiliated teaching centres: Holland Bloorview Kids Rehabilitation, Lakeview Health, and the Rouge Valley Health Network.

Students start the program in the Summer session. Upon completion of all program requirements, students are eligible for the MSc degree and certification in the chosen dental specialty.

Note: coursework-only students are ineligible to enrol in the PhD in Dentistry program at a later date.

Thesis-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 1, 3, and 4:**
    - DEN1001H *Graduate Research Dissemination Seminars*
  - **Year 2:**
    - DEN1015H *Introduction to Biostatistics*.
- In the **specialty of Oral and Maxillofacial Surgery**, complete **21.0 required FCEs** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - Year **1:**
    - DEN1002H *Oral Pathology*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1311Y *Oral Surgical Pathology*
    - DEN2051Y *Surgical Orthodontics I*
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
    - DEN3004Y *Oral and Maxillofacial Surgery 4: Applied Surgical Anatomy of the Head and Neck*
    - DEN3005H *Head and Neck Anatomy*
    - DEN3006H *Bates' Guide to Physical Examination*
    - PDE9094Y *Clinical Conferences*
    - Begin **thesis research**
    - Principles of Surgery module taken through the Department of Surgery in the Temerty Faculty of Medicine (0.0 FCE)
  - **Year 2:**
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
    - Continue with thesis research
  - **Year 3:**
    - DEN1312Y *Advanced Oral Surgical Pathology I*
    - DEN2052Y *Surgical Orthodontics II*
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
    - DEN3004Y *Oral and Maxillofacial Surgery 4: Applied Surgical Anatomy of the Head and Neck*
    - PDE9094Y *Clinical Conferences*
    - Continue with thesis research
  - **Year 4:**
    - DEN2052Y *Surgical Orthodontics II* (audit only)
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
    - **Oral defence** of the written thesis.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 13 sessions full-time (typical registration sequence: S-FWS-FWS-FWS-FWS)
Time Limit: 5 years full-time

Coursework-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs)** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 1, 3, and 4:**
    - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Oral and Maxillofacial Surgery**, complete **21.0 required FCEs, 2.0 elective FCEs, and a research practicum (0.5 FCE)** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - **Year 1:**
    - DEN1002H *Oral Pathology*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1311Y *Oral Surgical Pathology*
    - DEN2051Y *Surgical Orthodontics I*
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
    - DEN3004Y *Oral and Maxillofacial Surgery 4: Applied Surgical Anatomy of the Head and Neck*
    - DEN3005H *Head and Neck Anatomy*
    - DEN3006H *Bates' Guide to Physical Examination*
    - PDE9094Y *Clinical Conferences*
    - Principles of Surgery module taken through the Department of Surgery in the Temerty Faculty of Medicine (0.0 FCE)
    - 2.0 elective FCEs in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
  - **Year 2:**
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
  - **Year 3:**
    - DEN1312Y *Advanced Oral Surgical Pathology I*
    - DEN2052Y *Surgical Orthodontics II*
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
    - DEN3004Y *Oral and Maxillofacial Surgery 4: Applied Surgical Anatomy of the Head and Neck*
    - PDE9094Y *Clinical Conferences*
  - **Year 4:**
    - DEN2052Y *Surgical Orthodontics II* (audit only)
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
    - Prepare a **research practicum** (DEN1061H); successfully complete an **oral examination**.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 13 sessions full-time (typical registration sequence: S-FWS-FWS-FWS-FWS)
Time Limit: 5 years full-time

Dentistry: Dentistry MSc; Specialty: Oral and Maxillofacial Surgery (Effective Summer 2025)

The Dentistry MSc, Oral and Maxillofacial Surgery specialty is a four-year full-time program. This program is available for international applicants only. Domestic applicants should refer to the combined degree program: MD/MSc in Oral and Maxillofacial Surgery. The specialty in Oral and Maxillofacial Surgery is concerned with and includes the diagnosis and surgical and adjunctive treatment of disorders, diseases, injuries, and defects, involving the functional and aesthetic aspects of the hard and soft tissues of the oral and maxillofacial regions and related structures. Clinical activities are based primarily at Mt. Sinai Hospital, Sunnybrook Health Sciences Centre, Humber River Hospital, and The Hospital for Sick Children. There is also additional participation at other University-affiliated teaching centres: Holland Bloorview Kids Rehabilitation, Lakeview Health, and the Rouge Valley Health Network.

Students start the program in the Summer session. Upon completion of all program requirements, students are eligible for the MSc degree and certification in the chosen dental specialty.

Note: coursework-only students are ineligible to enrol in the PhD in Dentistry program at a later date.

Thesis-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 1, 3, and 4:**
    - DEN1001H *Graduate Research Dissemination Seminars*
  - **Year 2:**
    - DEN1015H *Introduction to Biostatistics*.
- In the **specialty of Oral and Maxillofacial Surgery**, complete **21.0 required FCEs** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - **Year 1:**
    - DEN1002H *Oral Pathology*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1311Y *Oral Surgical Pathology*
    - DEN2051Y *Surgical Orthodontics I*
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
    - DEN3004Y *Oral and Maxillofacial Surgery 4: Applied Surgical Anatomy of the Head and Neck*
    - DEN3005H *Head and Neck Anatomy*
    - DEN3006H *Bates' Guide to Physical Examination*
    - PDE9094Y *Clinical Conferences*
    - Begin **thesis research**
    - Principles of Surgery module taken through the Department of Surgery in the Temerty Faculty of Medicine (0.0 FCE)
  - **Year 2:**
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
    - Continue with thesis research
  - **Year 3:**
    - DEN1312Y *Advanced Oral Surgical Pathology I*
    - DEN2052Y *Surgical Orthodontics II*
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
    - DEN3004Y *Oral and Maxillofacial Surgery 4: Applied Surgical Anatomy of the Head and Neck*
    - PDE9094Y *Clinical Conferences*
    - Continue with thesis research
  - **Year 4:**
    - DEN2052Y *Surgical Orthodontics II* (audit only)
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
    - **Oral defence** of the written thesis.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 13 sessions full-time (typical registration sequence: S-FWS-FWS-FWS-FWS)
Time Limit: 5 years full-time

Coursework-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs)** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 1, 3, and 4:**
    - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Oral and Maxillofacial Surgery**, complete **21.0 required FCEs, 2.0 elective FCEs, and a research practicum (0.5 FCE)** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - **Year 1:**
    - DEN1002H *Oral Pathology*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1311Y *Oral Surgical Pathology*
    - DEN2051Y *Surgical Orthodontics I*
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*

        - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
        - DEN3004Y *Oral and Maxillofacial Surgery 4: Applied Surgical Anatomy of the Head and Neck*
        - DEN3005H *Head and Neck Anatomy*
        - DEN3006H *Bates' Guide to Physical Examination*
        - PDE9094Y *Clinical Conferences*
        - Principles of Surgery module taken through the Department of Surgery in the Temerty Faculty of Medicine (0.0 FCE)
        - 2.0 elective FCEs in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
    - **Year 2:**
        - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
        - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
        - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
    - **Year 3:**
        - DEN1312Y *Advanced Oral Surgical Pathology I*
        - DEN2052Y *Surgical Orthodontics II*
        - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
        - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
        - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
        - DEN3004Y *Oral and Maxillofacial Surgery 4: Applied Surgical Anatomy of the Head and Neck*
        - PDE9094Y *Clinical Conferences*
    - **Year 4:**
        - DEN2052Y *Surgical Orthodontics II* (audit only)
        - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
        - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
        - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
        - Prepare a **research practicum** (DEN1061H); successfully complete an **oral examination**.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 13 sessions full-time (typical registration sequence: S-FWS-FWS-FWS-FWS)
Time Limit: 5 years full-time

Dentistry: Dentistry MSc; Specialty: Oral Medicine

The Dentistry MSc, Oral Medicine specialty is a three-year full-time program. The specialty in Oral Medicine focuses on nonsurgical management of oral diseases including the management of oral mucosal and salivary gland diseases, temporomandibular disorders, and orofacial pain, the oral complications of systemic disease, and dental management of medically complex patients.

Students start the program in the Summer session. Upon completion of all program requirements, students are eligible for the MSc degree and certification in the chosen dental specialty.

Note: coursework-only students are ineligible to enrol in the PhD in Dentistry program at a later date.

Thesis-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
    - **Year 1:**
        - DEN1010H *Research Ethics*
        - DEN1015H *Introduction to Biostatistics*
        - DEN1101H *Introduction to Research Methods and Dissemination*
    - **Years 1 and 3:**
        - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Oral Medicine**, complete a total of **7.5 required FCEs** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
    - **Year 1:**
        - DEN1002H *Oral Pathology*
        - DEN1007H *Oral and Maxillofacial Radiology*
        - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
        - DEN1211Y *Oral Medicine I*
        - DEN1311Y *Oral Surgical Pathology*
        - Begin **thesis research**
    - **Year 2:**
        - DEN1212Y *Oral Medicine II*
        - DEN1312Y *Advanced Oral Surgical Pathology I*
        - Continue with thesis research
    - **Year 3:**
        - DEN1213Y *Oral Medicine III*
        - DEN1313Y *Advanced Oral Surgical Pathology II*
        - **Oral defence** of the written thesis.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person

Program Length: 10 sessions full-time (typical registration sequence: S-FWS-FWS-FWS)
Time Limit: 4 years full-time

Coursework-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs)** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 1 and 3:**
    - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Oral Medicine**, complete a total of **7.5 required FCEs, 2.0 elective FCEs, and a research practicum (0.5 FCE)** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  - **Year 1:**
    - DEN1002H *Oral Pathology*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1211Y *Oral Medicine I*
    - DEN1311Y *Oral Surgical Pathology*
    - 2.0 elective FCEs in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
  - **Year 2:**
    - DEN1212Y *Oral Medicine II*
    - DEN1312Y *Advanced Oral Surgical Pathology I*
  - **Year 3:**
    - DEN1213Y *Oral Medicine III*
    - DEN1313Y *Advanced Oral Surgical Pathology II*
    - Prepare a **research practicum** (DEN1061H); successfully complete an **oral examination**.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 10 sessions full-time (typical registration sequence: S-FWS-FWS-FWS)
Time Limit: 4 years full-time

Dentistry: Dentistry MSc; Specialty: Orthodontics and Dentofacial Orthopedics (Effective Summer 2024)

The Dentistry MSc, Orthodontics and Dentofacial Orthopedics specialty is a three-year full-time program. The specialty in Orthodontics and Dentofacial Orthopedics is concerned with the supervision, guidance, and correction of the growing or mature dentofacial structures and the diagnosis, prevention, and treatment of any abnormalities associated with these structures.

Students start the program in the Summer session. Upon completion of all program requirements, students are eligible for the MSc degree and certification in the chosen dental specialty.

Note: coursework-only students are ineligible to enrol in the PhD in Dentistry program at a later date.

Thesis-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Orthodontics and Dentofacial Orthopedics**, complete **14.5 required FCEs** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - **Year 1:**
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1060H *Craniofacial Neurophysiology: Sensory, Pain, and Neuromuscular Functions*
    - DEN2001Y *Orthodontics 1: Advanced Orthodontic Diagnosis and Treatment Planning*
    - DEN2006Y *Facial Growth and Facial Analysis*

        - DEN2010H *Tissue Reaction to Orthodontic and Orthopedic Forces*
        - DEN2041H *Interceptive Orthodontics Diagnosis and Etiology*
        - DEN2051Y *Surgical Orthodontics I*
        - DEN3005H *Head and Neck Anatomy*
        - PDE9094Y *Clinical Conferences*
        - Begin **thesis research**
    - **Year 2:**
        - DEN1016H *Occlusion: Function and Dysfunction*
        - DEN1017H *Temporomandibular Disorders*
        - DEN2002Y *Orthodontics 2: Biomechanics, Orthodontic Technique, and Practice Administration*
        - DEN2007Y *Craniofacial Anomalies*
        - DEN2009H *Classic Theories of Craniofacial Growth*
        - DEN2011Y *Craniofacial Morphology and Development*
        - DEN2042H *Interceptive Orthodontics Seminars on Interceptive and Early Treatment*
        - DEN2052Y *Surgical Orthodontics II*
        - PDE9094Y *Clinical Conferences*
        - Continue with thesis research
    - **Year 3:**
        - DEN2003Y *Orthodontics 3: Orthodontic Technique and Clinical Practice*
        - DEN2043H *Interceptive Orthodontics Management and Technique*
        - PDE9094Y *Clinical Conferences*
        - **Oral defence** of the written thesis.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 10 sessions full-time (typical registration sequence: S-FWS-FWS-FWS)
Time Limit: 4 years full-time

Coursework-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs)** as follows:
    - **Year 1:**
        - DEN1010H *Research Ethics*
        - DEN1015H *Introduction to Biostatistics*
        - DEN1101H *Introduction to Research Methods and Dissemination*
    - **Years 2 and 3:**
        - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Orthodontics and Dentofacial Orthopedics**, complete **14.5 required FCEs, 2.0 elective FCEs, and a research practicum (0.5 FCE)** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
    - **Year 1:**
        - DEN1007H *Oral and Maxillofacial Radiology*
        - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
        - DEN1060H *Craniofacial Neurophysiology: Sensory, Pain, and Neuromuscular Functions*
        - DEN2001Y *Orthodontics 1: Advanced Orthodontic Diagnosis and Treatment Planning*
        - DEN2006Y *Facial Growth and Facial Analysis*
        - DEN2010H *Tissue Reaction to Orthodontic and Orthopedic Forces*
        - DEN2041H *Interceptive Orthodontics Diagnosis and Etiology*
        - DEN2051Y *Surgical Orthodontics I*
        - DEN3005H *Head and Neck Anatomy*
        - PDE9094Y *Clinical Conferences*
        - 2.0 elective FCEs in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
    - **Year 2:**
        - DEN1016H *Occlusion: Function and Dysfunction*
        - DEN1017H *Temporomandibular Disorders*
        - DEN2002Y *Orthodontics 2: Biomechanics, Orthodontic Technique, and Practice Administration*
        - DEN2007Y *Craniofacial Anomalies*
        - DEN2009H *Classic Theories of Craniofacial Growth*
        - DEN2011Y *Craniofacial Morphology and Development*
        - DEN2042H *Interceptive Orthodontics Seminars on Interceptive and Early Treatment*
        - DEN2052Y *Surgical Orthodontics II*
        - PDE9094Y *Clinical Conferences*
    - **Year 3:**
        - DEN2003Y *Orthodontics 3: Orthodontic Technique and Clinical Practice*
        - DEN2043H *Interceptive Orthodontics Management and Technique*
        - PDE9094Y *Clinical Conferences*
        - Prepare a **research practicum** (DEN1061H); successfully complete an **oral examination**.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 10 sessions full-time (typical registration sequence: S-FWS-FWS-FWS)
Time Limit: 4 years full-time

Dentistry: Dentistry MSc; Specialty: Orthodontics and Dentofacial Orthopedics (Effective Summer 2025)

The Dentistry MSc, Orthodontics and Dentofacial Orthopedics specialty is a three-year full-time program. The specialty in Orthodontics and Dentofacial Orthopedics is concerned with the supervision, guidance, and correction of the growing or mature dentofacial structures and the diagnosis, prevention, and treatment of any abnormalities associated with these structures.

Students start the program in the Summer session. Upon completion of all program requirements, students are eligible for the MSc degree and certification in the chosen dental specialty.

Note: coursework-only students are ineligible to enrol in the PhD in Dentistry program at a later date.

Thesis-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Orthodontics and Dentofacial Orthopedics**, complete **14.75 required FCEs** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - **Year 1:**
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1060H *Craniofacial Neurophysiology: Sensory, Pain, and Neuromuscular Functions*
    - DEN2001Y *Orthodontics 1: Advanced Orthodontic Diagnosis and Treatment Planning*
    - DEN2006Y *Facial Growth and Facial Analysis*
    - DEN2010H *Tissue Reaction to Orthodontic and Orthopedic Forces*
    - DEN2041H *Interceptive Orthodontics Diagnosis and Etiology*
    - DEN2051Y *Surgical Orthodontics I*
    - DEN3005H *Head and Neck Anatomy*
    - PDE9094Y *Clinical Conferences*
    - Begin **thesis research**
  - **Year 2:**
    - DEN1016H *Occlusion: Function and Dysfunction*
    - DEN1017H *Temporomandibular Disorders*
    - DEN2002Y *Orthodontics 2: Biomechanics, Orthodontic Technique, and Practice Administration*
    - DEN2007Y *Craniofacial Anomalies*
    - DEN2009H *Classic Theories of Craniofacial Growth*
    - DEN2011Y *Craniofacial Morphology and Development*
    - DEN2012H *Molecular Basis of Craniofacial Growth*
    - DEN2042H *Interceptive Orthodontics Seminars on Interceptive and Early Treatment*
    - DEN2052Y *Surgical Orthodontics II*
    - PDE9094Y *Clinical Conferences*
    - Continue with thesis research
  - **Year 3:**
    - DEN2003Y *Orthodontics 3: Orthodontic Technique and Clinical Practice*
    - DEN2043H *Interceptive Orthodontics Management and Technique*
    - PDE9094Y *Clinical Conferences*
    - **Oral defence** of the written thesis.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 10 sessions full-time (typical registration sequence: S-FWS-FWS-FWS)
Time Limit: 4 years full-time

Coursework-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs)** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*

        - DEN1101H *Introduction to Research Methods and Dissemination*
    - **Years 2 and 3:**
        - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Orthodontics and Dentofacial Orthopedics**, complete **14.75 required FCEs, 2.0 elective FCEs, and a research practicum (0.5 FCE)** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
    - **Year 1:**
        - DEN1007H *Oral and Maxillofacial Radiology*
        - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
        - DEN1060H *Craniofacial Neurophysiology: Sensory, Pain, and Neuromuscular Functions*
        - DEN2001Y *Orthodontics 1: Advanced Orthodontic Diagnosis and Treatment Planning*
        - DEN2006Y *Facial Growth and Facial Analysis*
        - DEN2010H *Tissue Reaction to Orthodontic and Orthopedic Forces*
        - DEN2041H *Interceptive Orthodontics Diagnosis and Etiology*
        - DEN2051Y *Surgical Orthodontics I*
        - DEN3005H *Head and Neck Anatomy*
        - PDE9094Y *Clinical Conferences*
        - 2.0 elective FCEs in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
    - **Year 2:**
        - DEN1016H *Occlusion: Function and Dysfunction*
        - DEN1017H *Temporomandibular Disorders*
        - DEN2002Y *Orthodontics 2: Biomechanics, Orthodontic Technique, and Practice Administration*
        - DEN2007Y *Craniofacial Anomalies*
        - DEN2009H *Classic Theories of Craniofacial Growth*
        - DEN2011Y *Craniofacial Morphology and Development*
        - DEN2012H *Molecular Basis of Craniofacial Growth*
        - DEN2042H *Interceptive Orthodontics Seminars on Interceptive and Early Treatment*
        - DEN2052Y *Surgical Orthodontics II*
        - PDE9094Y *Clinical Conferences*
    - **Year 3:**
        - DEN2003Y *Orthodontics 3: Orthodontic Technique and Clinical Practice*
        - DEN2043H *Interceptive Orthodontics Management and Technique*
        - PDE9094Y *Clinical Conferences*
        - Prepare a **research practicum** (DEN1061H); successfully complete an **oral examination**.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 10 sessions full-time (typical registration sequence: S-FWS-FWS-FWS)
Time Limit: 4 years full-time

Dentistry: Dentistry MSc; Specialty: Pediatric Dentistry (Effective Summer 2024)

The Dentistry MSc, Pediatric Dentistry specialty is a three-year full-time program. Pediatric dentists provide primary and comprehensive preventive and therapeutic oral health diagnosis, care, and consultative expertise for infants and children through adolescence, including those of all ages with special care needs. The didactic program is centered at the Faculty of Dentistry, while the clinical program will be divided between the Faculty of Dentistry, the University-affiliated teaching hospitals and community-based Toronto Public Health dental clinic.

Students start the program in the Summer session. Upon completion of all program requirements, students are eligible for the MSc degree and certification in the chosen dental specialty.

Note: coursework-only students are ineligible to enrol in the PhD in Dentistry program at a later date.

Thesis-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
    - **Year 1:**
        - DEN1010H *Research Ethics*
        - DEN1015H *Introduction to Biostatistics*
        - DEN1101H *Introduction to Research Methods and Dissemination*
    - **Years 2 and 3:**
        - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Pediatric Dentistry**, complete **23.0 required FCEs** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
    - **Year 1:**
        - DEN1002H *Oral Pathology*
        - DEN1003H *Preventive Dentistry*
        - DEN1007H *Oral and Maxillofacial Radiology*
        - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
        - DEN1062H *Pharmacology of Dental Therapeutics*
        - DEN1090H *Inhalation and Oral Minimal and Moderate Sedation for Dental Procedures*

        - DEN2007Y *Craniofacial Anomalies*
        - DEN4003Y *Pediatric Dentistry 3: Facial and Dental Growth and Development in Pediatric Dentistry*
        - DEN4004H *Pediatric Dentistry 4: Child Behaviour Management*
        - DEN4006Y *Pediatric Dentistry 6: Oral and Maxillofacial Surgery as Applied to Pediatric Dentistry*
        - DEN4007H *Pulp Therapy and Trauma*
        - DEN4009Y *Pediatrics*
        - DEN4010Y *Care of Patients With Special Health Care Needs*
        - DEN4011Y *Conscious Sedation and Anaesthesia in Pediatric Dentistry*
        - DEN4012Y *Clinical Pediatric Dentistry I*
        - DEN4101Y *Pediatric Dentistry Theory I*
        - DEN4201Y *Pediatric Dentistry Journal/Literature Review I*
        - DEN4801Y *Orthodontics for Pediatric Dentistry I*
        - PDE9094Y *Clinical Conferences*
        - Begin **thesis research**
    - **Year 2:**
        - DEN1070H *Advances in Dental Materials Science*
        - DEN4013Y *Clinical Pediatric Dentistry II*
        - DEN4102Y *Pediatric Dentistry Theory II*
        - DEN4202Y *Pediatric Dentistry Journal/Literature Review II*
        - DEN4802Y *Orthodontics for Pediatric Dentistry II*
        - PDE9094Y *Clinical Conferences*
        - Continue with thesis research
    - **Year 3:**
        - DEN4014Y *Clinical Pediatric Dentistry III*
        - DEN4103Y *Pediatric Dentistry Theory III*
        - DEN4203Y *Pediatric Dentistry Journal/Literature Review III*
        - DEN4803Y *Orthodontics for Pediatric Dentistry III*
        - **Oral defence** of the written thesis.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Program Length: 10 sessions full-time (typical registration sequence: S-FWS-FWS-FWS)
Time Limit: 4 years full-time

Coursework-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs)** as follows:
    - **Year 1:**
        - DEN1010H *Research Ethics*
        - DEN1015H *Introduction to Biostatistics*
        - DEN1101H *Introduction to Research Methods and Dissemination*
    - **Years 2 and 3:**
        - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Pediatric Dentistry**, complete **23.0 required FCEs, 2.0 elective FCEs, and a research practicum (0.5 FCE)** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty. Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
    - **Year 1:**
        - DEN1002H *Oral Pathology*
        - DEN1003H *Preventive Dentistry*
        - DEN1007H *Oral and Maxillofacial Radiology*
        - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
        - DEN1062H *Pharmacology of Dental Therapeutics*
        - DEN1090H *Inhalation and Oral Minimal and Moderate Sedation for Dental Procedures*
        - DEN2007Y *Craniofacial Anomalies*
        - DEN4003Y *Pediatric Dentistry 3: Facial and Dental Growth and Development in Pediatric Dentistry*
        - DEN4004H *Pediatric Dentistry 4: Child Behaviour Management*
        - DEN4006Y *Pediatric Dentistry 6: Oral and Maxillofacial Surgery as Applied to Pediatric Dentistry*
        - DEN4007H *Pulp Therapy and Trauma*
        - DEN4009Y *Pediatrics*
        - DEN4010Y *Care of Patients With Special Health Care Needs*
        - DEN4011Y *Conscious Sedation and Anaesthesia in Pediatric Dentistry*
        - DEN4012Y *Clinical Pediatric Dentistry I*
        - DEN4101Y *Pediatric Dentistry Theory I*
        - DEN4201Y *Pediatric Dentistry Journal/Literature Review I*
        - DEN4801Y *Orthodontics for Pediatric Dentistry I*
        - PDE9094Y *Clinical Conferences*
        - 2.0 elective FCEs in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
    - **Year 2:**
        - DEN1070H *Advances in Dental Materials Science*
        - DEN4013Y *Clinical Pediatric Dentistry II*
        - DEN4102Y *Pediatric Dentistry Theory II*
        - DEN4202Y *Pediatric Dentistry Journal/Literature Review II*
        - DEN4802Y *Orthodontics for Pediatric Dentistry II*
        - PDE9094Y *Clinical Conferences*
    - **Year 3:**
        - DEN4014Y *Clinical Pediatric Dentistry III*
        - DEN4103Y *Pediatric Dentistry Theory III*
        - DEN4203Y *Pediatric Dentistry Journal/Literature Review III*

        - DEN4803Y *Orthodontics for Pediatric Dentistry III*
        - Prepare a **research practicum** (DEN1061H); successfully complete an **oral examination**.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 10 sessions full-time (typical registration sequence: S-FWS-FWS-FWS)
Time Limit: 4 years full-time

Dentistry: Dentistry MSc; Specialty: Pediatric Dentistry (Effective Summer 2025)

The Dentistry MSc, Pediatric Dentistry specialty is a three-year full-time program. Pediatric dentists provide primary and comprehensive preventive and therapeutic oral health diagnosis, care, and consultative expertise for infants and children through adolescence, including those of all ages with special care needs. The didactic program is centered at the Faculty of Dentistry, while the clinical program will be divided between the Faculty of Dentistry, the University-affiliated teaching hospitals and community-based Toronto Public Health dental clinic.

Students start the program in the Summer session. Upon completion of all program requirements, students are eligible for the MSc degree and certification in the chosen dental specialty.

Note: coursework-only students are ineligible to enrol in the PhD in Dentistry program at a later date.

Thesis-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
    - **Year 1:**
        - DEN1010H *Research Ethics*
        - DEN1015H *Introduction to Biostatistics*
        - DEN1101H *Introduction to Research Methods and Dissemination*
    - **Years 2 and 3:**
        - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Pediatric Dentistry**, complete **22.75 required FCEs** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty. Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
    - **Year 1:**
        - DEN1002H *Oral Pathology*
        - DEN1003H *Preventive Dentistry*
        - DEN1007H *Oral and Maxillofacial Radiology*
        - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
        - DEN1062H *Pharmacology of Dental Therapeutics*
        - DEN1090H *Inhalation and Oral Minimal and Moderate Sedation for Dental Procedures*
        - DEN2007Y *Craniofacial Anomalies*
        - DEN2012H *Molecular Basis of Craniofacial Growth*
        - DEN4003H *Craniofacial Growth and Development in Utero to Adolescence*
        - DEN4004H *Pediatric Dentistry 4: Child Behaviour Management*
        - DEN4006Y *Pediatric Dentistry 6: Oral and Maxillofacial Surgery as Applied to Pediatric Dentistry*
        - DEN4007H *Pulp Therapy and Trauma*
        - DEN4009Y *Pediatrics*
        - DEN4010Y *Care of Patients With Special Health Care Needs*
        - DEN4011Y *Conscious Sedation and Anaesthesia in Pediatric Dentistry*
        - DEN4012Y *Clinical Pediatric Dentistry I*
        - DEN4101Y *Pediatric Dentistry Theory I*
        - DEN4201Y *Pediatric Dentistry Journal/Literature Review I*
        - DEN4801Y *Orthodontics for Pediatric Dentistry I*
        - PDE9094Y *Clinical Conferences*
        - Begin **thesis research**
    - **Year 2:**
        - DEN1070H *Advances in Dental Materials Science*
        - DEN4013Y *Clinical Pediatric Dentistry II*
        - DEN4102Y *Pediatric Dentistry Theory II*
        - DEN4202Y *Pediatric Dentistry Journal/Literature Review II*
        - DEN4802Y *Orthodontics for Pediatric Dentistry II*
        - PDE9094Y *Clinical Conferences*
        - Continue with thesis research
    - **Year 3:**
        - DEN4014Y *Clinical Pediatric Dentistry III*
        - DEN4103Y *Pediatric Dentistry Theory III*
        - DEN4203Y *Pediatric Dentistry Journal/Literature Review III*
        - DEN4803Y *Orthodontics for Pediatric Dentistry III*
        - **Oral defence** of the written thesis.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Program Length: 10 sessions full-time (typical registration sequence: S-FWS-FWS-FWS)
Time Limit: 4 years full-time

Coursework-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs)** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Pediatric Dentistry**, complete **22.75 required FCEs, 2.0 elective FCEs, and a research practicum (0.5 FCE)** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - **Year 1:**
    - DEN1002H *Oral Pathology*
    - DEN1003H *Preventive Dentistry*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1062H *Pharmacology of Dental Therapeutics*
    - DEN1090H *Inhalation and Oral Minimal and Moderate Sedation for Dental Procedures*
    - DEN2007Y *Craniofacial Anomalies*
    - DEN2012H *Molecular Basis of Craniofacial Growth*
    - DEN4003H *Craniofacial Growth and Development in Utero to Adolescence*
    - DEN4004H *Pediatric Dentistry 4: Child Behaviour Management*
    - DEN4006Y *Pediatric Dentistry 6: Oral and Maxillofacial Surgery as Applied to Pediatric Dentistry*
    - DEN4007H *Pulp Therapy and Trauma*
    - DEN4009Y *Pediatrics*
    - DEN4010Y *Care of Patients With Special Health Care Needs*
    - DEN4011Y *Conscious Sedation and Anaesthesia in Pediatric Dentistry*
    - DEN4012Y *Clinical Pediatric Dentistry I*
    - DEN4101Y *Pediatric Dentistry Theory I*
    - DEN4201Y *Pediatric Dentistry Journal/Literature Review I*
    - DEN4801Y *Orthodontics for Pediatric Dentistry I*
    - PDE9094Y *Clinical Conferences*
    - 2.0 elective FCEs in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
  - **Year 2:**
    - DEN1070H *Advances in Dental Materials Science*
    - DEN4013Y *Clinical Pediatric Dentistry II*
    - DEN4102Y *Pediatric Dentistry Theory II*
    - DEN4202Y *Pediatric Dentistry Journal/Literature Review II*
    - DEN4802Y *Orthodontics for Pediatric Dentistry II*
    - PDE9094Y *Clinical Conferences*
  - **Year 3:**
    - DEN4014Y *Clinical Pediatric Dentistry III*
    - DEN4103Y *Pediatric Dentistry Theory III*
    - DEN4203Y *Pediatric Dentistry Journal/Literature Review III*
    - DEN4803Y *Orthodontics for Pediatric Dentistry III*
    - Prepare a **research practicum** (DEN1061H); successfully complete an **oral examination**.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 10 sessions full-time (typical registration sequence: S-FWS-FWS-FWS)
Time Limit: 4 years full-time

Dentistry: Dentistry MSc; Specialty: Periodontics

The Dentistry MSc, Periodontics specialty is a three-year full-time program. The specialty in Periodontics is concerned with the diagnosis, prevention, and treatment of diseases and conditions of the supporting and surrounding tissues of the teeth or their substitutes and the maintenance of the health, function, and aesthetics of these structures and tissues.

Students start the program in the Summer session. Upon completion of all program requirements, students are eligible for the MSc degree and certification in the chosen dental specialty.

Note: coursework-only students are ineligible to enrol in the PhD in Dentistry program at a later date.

Thesis-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Periodontics**, complete **18.0 required FCEs** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - **Year 1:**
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1033Y *Periodontology: Seminars and Clinics I*
    - DEN1070H *Advances in Dental Materials Science*
    - DEN1090H *Inhalation and Oral Minimal and Moderate Sedation for Dental Procedures*
    - DEN6061Y *Literature Review in Periodontics*
    - DEN6091Y *Principles and Practice of Periodontics I*
    - Begin **thesis research**
  - **Year 2:**
    - DEN1002H *Oral Pathology*
    - DEN1022H *Investigating Pathogenic Biofilms*
    - DEN1034Y *Periodontology: Seminars and Clinics II*
    - DEN1091Y *Parenteral Moderate Sedation for Dental Procedures*
    - DEN6062Y *Literature Review in Periodontics II*
    - DEN6071Y *Clinical Case Presentation I*
    - DEN6081Y *Biomaterials and Implant/Reconstructive Dentistry I*
    - DEN6092Y *Principles and Practice of Periodontics II*
    - PDE9094Y *Clinical Conferences*
    - Continue with thesis research
  - **Year 3:**
    - DEN1035Y *Periodontology: Seminars and Clinics III*
    - DEN1311Y *Oral Surgical Pathology*
    - DEN6072Y *Clinical Case Presentation II*
    - DEN6082Y *Biomaterials and Implant/Reconstructive Dentistry II*
    - DEN6093Y *Principles and Practice of Periodontics III*
    - PDE9094Y *Clinical Conferences*
    - **Oral defence** of the written thesis.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 10 sessions full-time (typical registration sequence: S-FWS-FWS-FWS)
Time Limit: 4 years full-time

Coursework-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Periodontics**, complete **18.0 required FCEs, 2.0 elective FCEs, and a research practicum (0.5 FCE)** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - **Year 1:**
    - DEN1007H *Oral Radiology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1033Y *Periodontology: Seminars and Clinics I*
    - DEN1070H *Advances in Dental Materials Science*
    - DEN1090H *Inhalation and Oral Minimal and Moderate Sedation for Dental Procedures*
    - DEN6061Y *Literature Review in Periodontics I*
    - DEN6091Y *Principles and Practice of Periodontics I*
    - 2.0 elective FCEs in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
  - **Year 2:**
    - DEN1002H *Oral Pathology*
    - DEN1022H *Investigating Pathogenic Biofilms*
    - DEN1034Y *Periodontology: Seminars and Clinics II*
    - DEN1091Y *Parenteral Moderate Sedation for Dental Procedures*
    - DEN6062Y *Literature Review in Periodontics II*
    - DEN6071Y *Clinical Case Presentation I*
    - DEN6081Y *Biomaterials and Implant/Reconstructive Dentistry I*
    - DEN6092Y *Principles and Practice of Periodontics II*
    - PDE9094Y *Clinical Conferences*

    - **Year 3:**
        - DEN1035Y *Periodontology: Seminars and Clinics III*
        - DEN1311Y *Oral Surgical Pathology*
        - DEN6072Y *Clinical Case Presentation II*
        - DEN6082Y *Biomaterials and Implant/Reconstructive Dentistry II*
        - DEN6093Y *Principles and Practice of Periodontics III*
        - PDE9094Y *Clinical Conferences*
        - Prepare a **research practicum** (DEN1061H); successfully complete an **oral examination**.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 10 sessions full-time (typical registration sequence: S-FWS-FWS-FWS)
Time Limit: 4 years full-time

Dentistry: Dentistry MSc; Specialty: Prosthodontics

The Dentistry MSc program, Prosthodontics specialty is a three-year full-time program. The specialty in Prosthodontics is concerned with the diagnosis, restoration, and maintenance of oral function, comfort, appearance, and health of the patient by the restoration of the natural teeth and/or the replacement of missing teeth and contiguous oral and maxillofacial tissues with artificial substitutes.

Upon completion of all program requirements, students are eligible for the MSc degree and certification in the chosen dental specialty. Note: coursework-only students are ineligible to enrol in the PhD in Dentistry program at a later date.

Thesis-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
    - **Year 1:**
        - DEN1010H *Research Ethics*
        - DEN1015H *Introduction to Biostatistics*
        - DEN1101H *Introduction to Research Methods and Dissemination*
    - **Years 2 and 3:**
        - DEN1001H *Graduate Research Dissemination Seminars*.
- In the **specialty of Prosthodontics**, complete **20.0 required FCEs** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
    - **Year 1:**
        - DEN1007H *Oral Radiology*
        - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
        - DEN1016H *Occlusion: Function and Dysfunction*
        - DEN1017H *Temporomandibular Disorders*
        - DEN1042Y *Restorative Dentistry and Laboratory Procedures*
        - DEN1060H *Craniofacial Neurophysiology: Sensory, Pain, and Neuromuscular Functions*
        - DEN1090H *Inhalation and Oral Minimal and Moderate Sedation for Dental Procedures*
        - DEN3005H *Head and Neck Anatomy*
        - DEN7011Y *Prosthodontic Treatment Planning*
        - DEN7031Y *Prosthodontic Topical Seminars I*
        - DEN7041Y *Prosthodontic Current Literature I*
        - DEN7051Y *Prosthodontics and Implant Surgery I*
        - DEN7061Y *Clinical Prosthodontics I*
        - Begin **thesis research**
    - **Year 2:**
        - DEN1070H *Advances in Dental Materials Sciences*
        - DEN7012Y *Prosthodontic Case Presentations I*
        - DEN7032Y *Prosthodontic Topical Seminars II*
        - DEN7042Y *Prosthodontic Current Literature II*
        - DEN7052Y *Prosthodontics and Implant Surgery II*
        - DEN7062Y *Clinical Prosthodontics II*
        - Continue with thesis research
    - **Year 3:**
        - DEN7013Y *Prosthodontic Case Presentations II*
        - DEN7033Y *Prosthodontic Topical Seminars III*
        - DEN7043Y *Prosthodontic Current Literature III*
        - DEN7063Y *Clinical Prosthodontics III*
        - PDE9094Y *Clinical Conferences*
        - **Oral defence** of the written thesis.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 9 sessions full-time (typical registration sequence: FWS-FWS-FWS)
Time Limit: 4 years full-time

Coursework-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.

- Doctor of Dental Surgery (DDS) or an equivalent degree with at least a B+ standing (3.3 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs)** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1001H *Graduate Research Dissemination Seminars.*
- In the **specialty of Prosthodontics**, complete a total of **20.0 required FCEs, 2.0 elective FCEs, and a research practicum (0.5 FCE)** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - **Year 1:**
    - DEN1007H *Oral Radiology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1016H *Occlusion: Function and Dysfunction*
    - DEN1017H *Temporomandibular Disorders*
    - DEN1042Y *Restorative Dentistry and Laboratory Procedures*
    - DEN1060H *Craniofacial Neurophysiology: Sensory, Pain, and Neuromuscular Functions*
    - DEN1090H *Inhalation and Oral Minimal and Moderate Sedation for Dental Procedures*
    - DEN3005H *Head and Neck Anatomy*
    - DEN7011Y *Prosthodontic Treatment Planning*
    - DEN7031Y *Prosthodontic Topical Seminars I*
    - DEN7041Y *Prosthodontic Current Literature I*
    - DEN7051Y *Prosthodontics and Implant Surgery I*
    - DEN7061Y *Clinical Prosthodontics I*
    - 2.0 elective FCEs in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
  - **Year 2:**
    - DEN1070H *Advances in Dental Materials Sciences*
    - DEN7012Y *Prosthodontic Case Presentations I*
    - DEN7032Y *Prosthodontic Topical Seminars II*
    - DEN7042Y *Prosthodontic Current Literature II*
    - DEN7052Y *Prosthodontics and Implant Surgery II*
    - DEN7062Y *Clinical Prosthodontics II*
  - **Year 3:**
    - DEN7013Y *Prosthodontic Case Presentations II*
    - DEN7033Y *Prosthodontic Topical Seminars III*
    - DEN7043Y *Prosthodontic Current Literature III*
    - DEN7063Y *Clinical Prosthodontics III*
    - PDE9094Y *Clinical Conferences*
    - Prepare a **research practicum** (DEN1061H); successfully complete an **oral examination**.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 9 sessions full-time (typical registration sequence: FWS-FWS-FWS)
Time Limit: 4 years full-time

Dentistry: Dentistry PhD; Field: Dental Biomedical Sciences

The Dentistry PhD, Dental Biomedical Sciences field is intended for those whose career goal is to work at the forefront of their field in oral health sciences as an independent research scientist in an academic, governmental, or industrial setting. Completion of the PhD may take longer than the indicated program length below.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Dentistry's additional admission requirements stated below.
- Students are normally admitted to a PhD program with a Doctor of Dental Surgery (DDS) or equivalent, with at least an A– standing (3.7 out of 4.0 grade point average [GPA]) in the final year from a recognized university. Students may also be admitted with an appropriate master's degree in a discipline appropriate to the intended field of doctoral study.

Completion Requirements

- Students undertake customized programs, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange students' coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 required full-course equivalents (FCEs), 2.0 elective FCEs, and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
    - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
  - **Years 1 to 4:**
    - DEN1100H *Graduate Research Dissemination Seminars*

    - **Year 2:**
        - 2.0 elective FCEs in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
        - Successfully pass a **qualifying oral examination** between 12 and 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
        - Continue with thesis research (RST9999Y)
    - **Year 3:**
        - Continue with thesis research (RST9999Y)
    - **Year 4:**
        - Complete any outstanding coursework
        - Continue with thesis research (RST9999Y)
    - **Year 5:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must meet a minimum residency requirement of one year, though it is the Faculty of Dentistry's expectation that students will normally remain on campus for four years.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program: Transfer

Transfer Requirements

- Highly qualified MSc students may be considered for transfer to the PhD program. MSc students who transfer to the PhD must fulfil the admission requirements listed under the PhD program and successfully complete the transfer examination.

Completion Requirements

- Students undertake customized programs, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange the student's coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs), 2.0 elective FCEs, and a thesis** as follows:
    - **Year 1:**
        - DEN1010H *Research Ethics*
        - DEN1015H *Introduction to Biostatistics*
        - DEN1101H *Introduction to Research Methods and Dissemination*
        - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
    - **Years 1 to 4:**
        - DEN1100H *Graduate Research Dissemination Seminars*
    - **Year 2:**
        - 2.0 elective FCEs in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
        - Successfully pass a **transfer examination** between 12 and 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
    - **Year 3:**
        - Continue with thesis research (RST9999Y)
    - **Year 4:**
        - Complete any outstanding coursework
        - Continue with thesis research (RST9999Y)
    - **Year 5:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must meet a minimum residency requirement of one year, though it is the Faculty of Dentistry's expectation that students will normally remain on campus for four years.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Dentistry: Dentistry PhD; Specialty: Dental Anaesthesia

The PhD program, Dental Anaesthesia specialty is a six-year full-time program. The specialty in Dental Anaesthesia is designed to prepare dentists with a full range of sedation and anaesthetic techniques for dental patients, with the focus on deep sedation and general anaesthesia. The teaching facilities for this program are provided by the combined resources of Dental Anaesthesia in the Faculty of Dentistry and the Department of Anaesthesia in the Temerty Faculty of Medicine. Training is given both at the Faculty of Dentistry and at teaching hospitals affiliated with the University.

Upon completion of all program requirements, students are eligible for the PhD degree and certification in the chosen dental specialty. Program completion will be contingent upon completion of all requirements for the research and specialty training components of the program.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Students are normally admitted to the PhD program with a Doctor of Dental Surgery (DDS) or equivalent, with at least an A– standing (3.7 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange the student's coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Dental Anaesthesia**, complete **15.5 required FCEs and 1.0 elective FCE** as follows:
  - **Year 1:**
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1055H *Basic Principles of Anaesthesia*
    - DEN1056Y *Basic Concepts in Clinical Medicine*
    - DEN1073Y *Dental Anaesthesia Graduate Seminars*
    - DEN1074Y *Foundations of Medicine as Applied to Dental Anaesthesia*
    - DEN1076H *General Anaesthesia for Medical Procedures — Adult I*
    - DEN1078H *General Anaesthesia for Dental Procedures — Adult I*
    - DEN1084H *Experiences in Clinical Teaching I*
    - DEN1087Y *Fundamentals of Dental Anaesthesia*
    - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
  - **Year 2:**
    - DEN1052Y *General Anaesthesia for Medical Procedures — Pediatric*
    - DEN1071H *Medical Anaesthesia Seminars I*
    - DEN1083Y *Experiences in Clinical Medicine*
    - DEN1085H *Experiences in Clinical Teaching II*
    - DEN1088Y *Fundamentals of Dental Anaesthesia II*
    - PDE9094Y *Clinical Conferences*
    - Continue with thesis research
    - Successfully pass a **qualifying oral examination** between 12 and 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
  - **Year 3:**
    - DEN1072H *Medical Anaesthesia Seminars II*
    - DEN1075Y *General Anaesthesia for Dental Procedures — Pediatric*
    - DEN1077H *General Anaesthesia for Medical Procedures — Adult II*
    - DEN1079H *General Anaesthesia for Dental Procedures — Adult II*
    - DEN1086H *Experiences in Clinical Teaching III*
    - DEN1089Y *Fundamentals of Dental Anaesthesia III*
    - PDE9094Y *Clinical Conferences*
    - Continue with thesis research
  - **Years 4 and 5:**
    - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
    - Complete any outstanding core or specialty-specific coursework
    - Continue with thesis research
  - **Year 6:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor’s research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

PhD Program: Transfer

Transfer Requirements

- Highly qualified MSc students in the thesis option may be considered for transfer to the PhD in Dentistry in the specialty of Dental Anaesthesia. MSc students who transfer to the PhD must fulfil the admission requirements listed under the PhD program and successfully complete the transfer examination.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis.

After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange students' coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Dental Anaesthesia**, complete **15.5 required FCEs and 1.0 elective FCE** as follows:
  - **Year 1:**
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1055H *Basic Principles of Anaesthesia*
    - DEN1056Y *Basic Concepts in Clinical Medicine*
    - DEN1073Y *Dental Anaesthesia Graduate Seminars*
    - DEN1074Y *Foundations of Medicine as Applied to Dental Anaesthesia*
    - DEN1076H *General Anaesthesia for Medical Procedures — Adult I*
    - DEN1078H *General Anaesthesia for Dental Procedures — Adult I*
    - DEN1084H *Experiences in Clinical Teaching I*
    - DEN1087Y *Fundamentals of Dental Anaesthesia*
    - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
  - **Year 2:**
    - DEN1052Y *General Anaesthesia for Medical Procedures — Pediatric*
    - DEN1071H *Medical Anaesthesia Seminars I*
    - DEN1083Y *Experiences in Clinical Medicine*
    - DEN1085H *Experiences in Clinical Teaching II*
    - DEN1088Y *Fundamentals of Dental Anaesthesia II*
    - PDE9094Y *Clinical Conferences*
    - Continue with thesis research
    - Successfully pass a **transfer examination** between 12 and 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and breadth of knowledge relative to the research project.
  - **Year 3:**
    - DEN1072H *Medical Anaesthesia Seminars II*
    - DEN1075Y *General Anaesthesia for Dental Procedures — Pediatric*
    - DEN1077H *General Anaesthesia for Medical Procedures — Adult II*
    - DEN1079H *General Anaesthesia for Dental Procedures — Adult II*
    - DEN1086H *Experiences in Clinical Teaching III*
    - DEN1089Y *Fundamentals of Dental Anaesthesia III*
    - PDE9094Y *Clinical Conferences*
    - Continue with thesis research
  - **Years 4 and 5:**
    - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
    - Complete any outstanding core or specialty-specific coursework
    - Continue with thesis research
  - **Year 6:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

Dentistry: Dentistry PhD; Specialty: Dental Public Health

The Dentistry PhD, Dental Public Health specialty is a five-year full-time program. This specialty consists of core subjects, with optional subjects chosen by students in consultation with the program director. Courses are given by the Faculty of Dentistry as well as other units, such as the Dalla Lana School of Public Health and the Institute of Health Policy, Management and Evaluation.

Upon completion of all program requirements, students are eligible for the PhD degree and certification in the chosen dental specialty. Program completion will be contingent upon completion of all requirements for the research and specialty training components of the program.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Dentistry's additional admission requirements stated below.
- Students are normally admitted to the PhD program with a Doctor of Dental Surgery (DDS) or equivalent, with at least an A– standing (3.7 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange the student's coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 1 and 2:**
    - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Dental Public Health**, complete **7.0 required FCEs and 1.0 elective FCE** as follows:
  - **Year 1:**
    - CHL5004H *Introduction to Public Health Sciences*
    - DEN1003H *Preventive Dentistry*
    - DEN1006Y *Seminars in Dental Public Health*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1051Y *Oral Epidemiology*
    - DEN1063Y *Practicum in Dental Public Health*
    - PDE9094Y *Clinical Conferences*
    - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
  - **Year 2:**
    - DEN1064H *Management Principles in Canadian Dental Health Organizations*
    - 0.5 FCE chosen in the area of health policy or health economics based on the student's clinical or research interests
    - 0.5 FCE chosen in the area of public health based on the student's clinical or research interests
    - Continue with thesis research
    - Successfully pass a **qualifying oral examination** between 12 to 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
  - **Years 3 and 4:**
    - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
    - Complete any outstanding core or specialty-specific coursework
    - Continue with thesis research
  - **Year 5:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program: Transfer

Transfer Requirements

- Highly qualified MSc students in the thesis option may be considered for transfer to the Dentistry PhD in the specialty of Dental Public Health. MSc students who transfer to the PhD must fulfil the admission requirements listed under the PhD program and successfully complete the transfer examination.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange the student's coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 1 and 2:**
    - DEN1100H *Graduate Research Dissemination Seminars.*
- In the **specialty of Dental Public Health**, complete **7.0 required FCEs and 1.0 elective FCE** as follows:
  - **Year 1:**
    - CHL5004H *Introduction to Public Health Sciences*
    - DEN1003H *Preventive Dentistry*
    - DEN1006Y *Seminars in Dental Public Health*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1051Y *Oral Epidemiology*
    - DEN1063Y *Practicum in Dental Public Health*
    - PDE9094Y *Clinical Conferences*
    - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
  - **Year 2:**
    - DEN1064H *Management Principles in Canadian Dental Health Organizations*

        - 0.5 FCE chosen in the area of health policy or health economics based on the student's clinical or research interests
        - 0.5 FCE chosen in the area of public health based on the student's clinical or research interests
        - Continue with thesis research
        - Successfully pass a **transfer examination** between 12 and 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
    - **Years 3 and 4:**
        - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
        - Complete any outstanding core or specialty-specific coursework
        - Continue with thesis research
    - **Year 5:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Dentistry: Dentistry PhD; Specialty: Endodontics

The Dentistry PhD, Endodontics specialty is a six-year full-time program. This specialty is designed to provide students with opportunities to acquire excellent clinical skills and comprehension of the underlying biology. Its components include: patient care, providing all aspects of endodontic treatment; topic-specific and current literature seminars; clinical conferences; core curriculum courses; rotation programs; research at the MSc level, including application for funding, preparation of manuscripts for publication, presentation at national and international research forums; and guest lectures. Students must complete a dental clinic rotation as part of the Endodontics specialty requirements.

Great emphasis is placed on self-learning in all of the program's components. Students are encouraged to identify research topics, related to endodontic science or any other dental or non-dental scientific area. Through continual updating of courses and research schedules, the program aims to achieve a balanced platform of excellent specialty education and committed service to patients. Students are encouraged to join the Ontario Society of Endodontists, the Canadian Academy of Endodontics, and the American Association of Endodontists.

Students start the program in the Summer session. Upon completion of all program requirements, students are eligible for the PhD degree and certification in the chosen dental specialty. Program completion will be contingent upon completion of all requirements for the research and specialty training components of the program.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Dentistry's additional admission requirements stated below.
- Students are normally admitted to the PhD program with a Doctor of Dental Surgery (DDS) or equivalent, with at least an A– standing (3.7 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange the student's coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
    - **Year 1:**
        - DEN1010H *Research Ethics*
        - DEN1015H *Introduction to Biostatistics*
    - **Year 2:**
        - DEN1101H *Introduction to Research Methods and Dissemination*
    - **Years 2 and 3:**
        - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Endodontics**, complete **18.0 required FCEs and 1.0 elective FCE** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
    - **Year 1:**
        - DEN1002H *Oral Pathology*
        - DEN1007H *Oral Radiology*
        - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
        - DEN1062H *Pharmacology of Dental Therapeutics*
        - DEN1070H *Advances in Dental Materials Science*
        - DEN1090H *Inhalation and Oral Minimal and Moderate Sedation for Dental Procedures*
        - DEN3005H *Head and Neck Anatomy*

        - DEN5005H *Introduction to Graduate Endodontics*
        - DEN5011Y *Graduate Endodontics Case Presentation I*
        - DEN5021Y *Graduate Endodontics Topical Literature 1*
        - DEN5031Y *Endodontics Current Literature Seminar 1*
        - DEN5091Y *Endodontic Clinic 1*
        - PDE9094Y *Clinical Conferences*
        - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
    - **Year 2:**
        - DEN1022H *Investigating Pathogenic Biofilms*
        - DEN1060H *Craniofacial Neurophysiology: Sensory, Pain, and Neuromuscular Functions*
        - DEN5004Y *Single Tooth Replacement with Implant Supported Prosthesis*
        - DEN5012Y *Graduate Endodontics Case Presentation II*
        - DEN5022Y *Graduate Endodontics Topical Literature 2*
        - DEN5032Y *Endodontics Current Literature Seminar 2*
        - DEN5092Y *Endodontic Clinic 2*
        - PDE9094Y *Clinical Conferences*
        - Continue with thesis research
        - Successfully pass a **qualifying oral examination** between 12 and 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
    - **Years 3 to 5:**
        - DEN5004Y *Single Tooth Replacement with Implant Supported Prosthesis*
        - DEN5013Y *Graduate Endodontics Case Presentation III*
        - DEN5033Y *Endodontics Current Literature Seminar 3*
        - DEN5093Y *Endodontic Clinic 3*
        - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
        - Complete any outstanding core or specialty-specific coursework
        - Continue with thesis research
    - **Year 6:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

PhD Program: Transfer

Transfer Requirements

- Highly qualified MSc students in the thesis option may be considered for transfer to the Dentistry PhD in the specialty of Endodontics. MSc students who transfer to the PhD must fulfil the admission requirements listed under the PhD program and successfully complete the transfer examination.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange the student's coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
    - **Year 1:**
        - DEN1010H *Research Ethics*
        - DEN1015H *Introduction to Biostatistics*
    - **Year 2:**
        - DEN1101H *Introduction to Research Methods and Dissemination*
    - **Years 2 and 3:**
        - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Endodontics**, complete **18.0 required FCEs and 1.0 elective FCE** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
    - **Year 1:**
        - DEN1002H *Oral Pathology*
        - DEN1007H *Oral Radiology*
        - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
        - DEN1062H *Pharmacology of Dental Therapeutics*
        - DEN1070H *Advances in Dental Materials Science*
        - DEN1090H *Inhalation and Oral Minimal and Moderate Sedation for Dental Procedures*
        - DEN3005H *Head and Neck Anatomy*
        - DEN5005H *Introduction to Graduate Endodontics*
        - DEN5011Y *Graduate Endodontics Case Presentation I*
        - DEN5021Y *Graduate Endodontics Topical Literature 1*
        - DEN5031Y *Endodontics Current Literature Seminar 1*
        - DEN5091Y *Endodontic Clinic 1*
        - PDE9094Y *Clinical Conferences*

        - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
    - **Year 2:**
        - DEN1022H *Investigating Pathogenic Biofilms*
        - DEN1060H *Craniofacial Neurophysiology: Sensory, Pain, and Neuromuscular Functions*
        - DEN5004Y *Single Tooth Replacement with Implant Supported Prosthesis*
        - DEN5012Y *Graduate Endodontics Case Presentation II*
        - DEN5022Y *Graduate Endodontics Topical Literature 2*
        - DEN5032Y *Endodontics Current Literature Seminar 2*
        - DEN5092Y *Endodontic Clinic 2*
        - PDE9094Y *Clinical Conferences*
        - Continue with thesis research
        - Successfully pass a **transfer examination** between 12 and 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
    - **Years 3 to 5:**
        - DEN5004Y *Single Tooth Replacement with Implant Supported Prosthesis*
        - DEN5013Y *Graduate Endodontics Case Presentation III*
        - DEN5033Y *Endodontics Current Literature Seminar 3*
        - DEN5093Y *Endodontic Clinic 3*
        - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
        - Complete any outstanding core or specialty-specific coursework
        - Continue with thesis research
    - **Year 6:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

Dentistry: Dentistry PhD; Specialty: Oral and Maxillofacial Pathology

The Dentistry PhD, Oral and Maxillofacial Pathology specialty is a six-year full-time program. The specialty in Oral and Maxillofacial Pathology focuses on the identification and management of diseases of the oral and maxillofacial regions through microscopic, clinical, biochemical, or other forms of examination. Oral and Maxillofacial Pathology includes histopathologic analysis of tissue samples, the investigation of, causes, and effects of diseases.

Students start the program in the Summer session. Upon completion of all program requirements, students are eligible for the PhD degree and certification in the chosen dental specialty. Program completion will be contingent upon completion of all requirements for the research and specialty training components of the program.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Dentistry's additional admission requirements stated below.
- Students are normally admitted to the PhD program with a Doctor of Dental Surgery (DDS) or equivalent, with at least an A– standing (3.7 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange the student's coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
    - **Year 1:**
        - DEN1010H *Research Ethics*
        - DEN1015H *Introduction to Biostatistics*
    - **Year 2:**
        - DEN1101H *Introduction to Research Methods and Dissemination*
    - **Years 2 and 3:**
        - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Oral and Maxillofacial Pathology**, complete **6.5 required FCEs and 1.0 elective FCE** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
    - **Year 1:**
        - LMP1300Y *General and Special Pathology*
        - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
    - **Year 2:**
        - DEN1002H *Oral Pathology*
        - DEN1007H *Oral and Maxillofacial Radiology*
        - DEN1014H *Clinical Epidemiology and Evidence-Based Care*

        - DEN1111Y *Advanced Oral and Maxillofacial Pathology I*
        - DEN1311Y *Oral Surgical Pathology*
        - Continue with thesis research
        - Successfully pass a **qualifying oral examination** between 12 and 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
    - **Year 3:**
        - DEN1112Y *Advanced Oral and Maxillofacial Pathology II*
        - DEN1312Y *Advanced Oral Surgical Pathology I*
        - Continue with thesis research
    - **Years 4 and 5:**
        - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
        - Complete any outstanding core or specialty-specific coursework
        - Continue with thesis research
    - **Year 6:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

PhD Program: Transfer

Transfer Requirements

- Highly qualified MSc students, who are in the thesis option of the MSc program, may be considered for transfer to the Dentistry PhD in the specialty of Oral and Maxillofacial Pathology. MSc students who transfer to the PhD must fulfil the admission requirements listed under the PhD program and successfully complete the transfer examination.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange the student's coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
    - **Year 1:**
        - DEN1010H *Research Ethics*
        - DEN1015H *Introduction to Biostatistics*
    - **Year 2:**
        - DEN1101H *Introduction to Research Methods and Dissemination*
    - **Years 2 and 3:**
        - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Oral and Maxillofacial Pathology**, complete **6.5 required FCEs and 1.0 elective FCE** as follows:
    - **Year 1:**
        - LMP1300Y *General and Special Pathology*
        - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
    - **Year 2:**
        - DEN1002H *Oral Pathology*
        - DEN1007H *Oral and Maxillofacial Radiology*
        - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
        - DEN1111Y *Advanced Oral and Maxillofacial Pathology I*
        - DEN1311Y *Oral Surgical Pathology*
        - Continue with thesis research
        - Successfully pass a **transfer examination** between 12 and 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
    - **Year 3:**
        - DEN1112Y *Advanced Oral and Maxillofacial Pathology II*
        - DEN1312Y *Advanced Oral Surgical Pathology I*
        - Continue with thesis research
    - **Years 4 and 5:**
        - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
        - Complete any outstanding core or specialty-specific coursework
        - Continue with thesis research
    - **Year 6:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

Dentistry: Dentistry PhD; Specialty: Oral and Maxillofacial Pathology and Oral Medicine

The Dentistry PhD, Oral and Maxillofacial Pathology and Oral Medicine specialty is a seven-year full-time program. The specialty in Oral and Maxillofacial Pathology and Oral Medicine is concerned with the diagnosis, nature, and primarily non-surgical management of oral, maxillofacial, and temporomandibular diseases and disorders, including dental management of patients with medical complications.

Students start the program in the Summer session. Upon completion of all program requirements, students are eligible for the PhD degree and certification in the chosen dental specialty. Program completion will be contingent upon completion of all requirements for the research and specialty training components of the program.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Dentistry's additional admission requirements stated below.
- Students are normally admitted to the PhD program with a Doctor of Dental Surgery (DDS) or equivalent, with at least an A– standing (3.7 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange the student's coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
  - **Year 2:**
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 4:**
    - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Oral and Maxillofacial Pathology and Oral Medicine**, complete **11.5 required FCEs and 1.0 elective FCE** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  - **Year 1:**
    - LMP1300Y *General and Special Pathology*
    - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
  - **Year 2:**
    - DEN1002H *Oral Pathology*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1111Y *Advanced Oral and Maxillofacial Pathology I*
    - DEN1211Y *Oral Medicine I*
    - DEN1311Y *Oral Surgical Pathology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - Continue with thesis research
    - Successfully pass a **qualifying oral examination** within 12 to 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
  - **Year 3:**
    - DEN1112Y *Advanced Oral and Maxillofacial Pathology II*
    - DEN1212Y *Oral Medicine II*
    - DEN1312Y *Advanced Oral Surgical Pathology I*
    - Continue with thesis research
  - **Year 4:**
    - DEN1113Y *Advanced Oral and Maxillofacial Pathology III*
    - DEN1213Y *Oral Medicine III*
    - DEN1313Y *Advanced Oral Surgical Pathology II*
    - Continue with thesis research
  - **Years 5 and 6:**
    - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
    - Complete any outstanding core or specialty-specific coursework
    - Continue with thesis research
  - **Year 7:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 7 years full-time (typical registration sequence: Continuous)
Time Limit: 9 years full-time

PhD Program: Transfer

Transfer Requirements

- Highly qualified MSc students in the thesis option may be considered for transfer to the Dentistry PhD in the specialty of Endodontics. MSc students who transfer to

the PhD must fulfil the admission requirements listed under the PhD program and successfully complete the transfer examination.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange the student's coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
  - **Year 2:**
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 4:**
    - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Oral and Maxillofacial Pathology and Oral Medicine**, complete **11.5 required FCEs and 1.0 elective FCE** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  - **Year 1:**
    - LMP1300Y *General and Special Pathology*
    - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable).
  - **Year 2:**
    - DEN1002H *Oral Pathology*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1111Y *Advanced Oral and Maxillofacial Pathology I*
    - DEN1211Y *Oral Medicine I*
    - DEN1311Y *Oral Surgical Pathology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - Continue with thesis research
    - Successfully pass a **transfer examination** within 12 to 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
  - **Year 3:**
    - DEN1112Y *Advanced Oral and Maxillofacial Pathology II*
    - DEN1212Y *Oral Medicine II*
    - DEN1312Y *Advanced Oral Surgical Pathology I*
    - Continue with thesis research
  - **Year 4:**
    - DEN1113Y *Advanced Oral and Maxillofacial Pathology III*
    - DEN1213Y *Oral Medicine III*
    - DEN1313Y *Advanced Oral Surgical Pathology II*
    - Continue with thesis research
  - **Years 5 and 6:**
    - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
    - Complete any outstanding core or specialty-specific coursework
    - Continue with thesis research
  - **Year 7:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 7 years full-time (typical registration sequence: Continuous)
Time Limit: 9 years full-time

Dentistry: Dentistry PhD; Specialty: Oral and Maxillofacial Radiology

The Dentistry PhD, Oral and Maxillofacial Radiology specialty, is a six-year full-time program. The specialty in Oral and Maxillofacial Radiology is concerned with the the prescription, production, and interpretation of diagnostic images of diseases and disorders of the craniofacial complex.

Upon completion of all program requirements, students are eligible for the PhD degree and certification in the chosen field of dental specialty. Program completion will be contingent upon completion of all requirements for the research and specialty training components of the program.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Students are normally admitted to the PhD program with a Doctor of Dental Surgery (DDS) or equivalent, with at least an A– standing (3.7 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis.

After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange the student's coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Oral and Maxillofacial Radiology**, complete **8.5 required FCEs and 1.0 elective FCE** as follows. Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - **Year 1:**
    - DEN1002H *Oral Pathology*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1017H *Temporomandibular Disorders*
    - DEN1094Y *Advanced Oral and Maxillofacial Radiology I*
    - DEN1311Y *Oral Surgical Pathology*
    - DEN3005H *Head and Neck Anatomy*
    - Mi Applied Physics modules taken through the Department of Medical Imaging in the Temerty Faculty of Medicine (0.0 FCE)
    - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
  - **Year 2:**
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1095Y *Advanced Oral and Maxillofacial Radiology II*
    - DEN1312Y *Advanced Oral Surgical Pathology I*
    - PDE9094Y *Clinical Conferences*
    - Mi Applied Physics modules taken through the Department of Medical Imaging in the Temerty Faculty of Medicine (0.0 FCE)
    - Clinical and Experimental Radiobiology modules taken through the Department of Radiation Oncology in the Temerty Faculty of Medicine (0.0 FCE)
    - Continue with thesis research
    - Successfully pass a **qualifying oral examination** within 12 to 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
  - **Year 3:**
    - DEN1096Y *Advanced Oral and Maxillofacial Radiology III*
    - PDE9094Y *Clinical Conferences*
    - Continue with thesis research
  - **Years 4 and 5:**
    - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
    - Complete any outstanding core or specialty-specific coursework
    - Continue with thesis research
  - **Year 6:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

PhD Program: Transfer

Transfer Requirements

- Highly qualified MSc students in the thesis option may be considered for transfer to the Dentistry PhD in the specialty of Oral and Maxillofacial Radiology. MSc students who transfer to the PhD must fulfil the admission requirements listed under the PhD program and successfully complete the transfer examination.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange students' coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Oral and Maxillofacial Radiology**, complete **8.5 required FCEs and 1.0 elective FCE** as follows. Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - **Year 1:**
    - DEN1002H *Oral Pathology*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1017H *Temporomandibular Disorders*
    - DEN1094Y *Advanced Oral and Maxillofacial Radiology I*
    - DEN1311Y *Oral Surgical Pathology*
    - DEN3005H *Head and Neck Anatomy*

        - Mi Applied Physics modules taken through the Department of Medical Imaging in the Temerty Faculty of Medicine (0.0 FCE)
        - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
    - **Year 2:**
        - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
        - DEN1015H *Introduction to Biostatistics*
        - DEN1095Y *Advanced Oral and Maxillofacial Radiology II*
        - DEN1312Y *Advanced Oral Surgical Pathology I*
        - PDE9094Y *Clinical Conferences*
        - Mi Applied Physics modules taken through the Department of Medical Imaging in the Temerty Faculty of Medicine (0.0 FCE)
        - Clinical and Experimental Radiobiology modules taken through the Department of Radiation Oncology in the Temerty Faculty of Medicine (0.0 FCE)
        - Continue with thesis research
        - Successfully pass a **transfer examination** within 12 to 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
    - **Year 3:**
        - DEN1096Y *Advanced Oral and Maxillofacial Radiology III*
        - PDE9094Y *Clinical Conferences*
        - Continue with thesis research
    - **Years 4 and 5:**
        - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
        - Complete any outstanding core or specialty-specific coursework
        - Continue with thesis research
    - **Year 6:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

Dentistry: Dentistry PhD; Specialty: Oral and Maxillofacial Surgery (Effective Summer 2024)

The Dentistry PhD, Oral and Maxillofacial Surgery specialty is a seven-year full-time program. The specialty in Oral and Maxillofacial Surgery is concerned with and includes the diagnosis and surgical and adjunctive treatment of disorders, diseases, injuries, and defects, involving the functional and aesthetic aspects of the hard and soft tissues of the oral and maxillofacial regions and related structures. Clinical activities are based primarily at Mt. Sinai Hospital, Sunnybrook Health Sciences Centre, Humber River Hospital, and The Hospital for Sick Children. There is also additional participation at other University-affiliated teaching centres: Holland Bloorview Kids Rehabilitation, Lakeview Health, and the Rouge Valley Health Network.

Students start the program in the Summer session. Upon completion of all program requirements, students are eligible for the PhD degree and certification in the chosen field of dental specialty. Program completion will be contingent upon completion of all requirements for the research and specialty training components of the program.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Students are normally admitted to the PhD program with a Doctor of Dental Surgery (DDS) or equivalent, with at least an A– standing (3.7 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange the student's coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
    - **Year 1:**
        - DEN1010H *Research Ethics*
        - DEN1015H *Introduction to Biostatistics*

        - DEN1101H *Introduction to Research Methods and Dissemination*
    - **Years 1, 3, and 4:**
        - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Oral and Maxillofacial Surgery**, complete **21.0 required FCEs and 1.0 elective FCE** as follows:
    - **Year 1:**
        - DEN1002H *Oral Pathology*
        - DEN1007H *Oral and Maxillofacial Radiology*
        - DEN1311Y *Oral Surgical Pathology*
        - DEN2051Y *Surgical Orthodontics I*
        - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
        - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
        - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
        - DEN3004Y *Oral and Maxillofacial Surgery 4: Applied Surgical Anatomy of the Head and Neck*
        - DEN3005H *Head and Neck Anatomy*
        - DEN3006H *Bates' Guide to Physical Examination*
        - PDE9094Y *Clinical Conferences*
        - Principles of Surgery module taken through the Department of Surgery in the Temerty Faculty of Medicine (0.0 FCE)
        - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
    - **Year 2:**
        - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
        - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
        - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
        - Continue with thesis research
        - Successfully pass a **qualifying oral examination** between 12 and 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
    - **Year 3:**
        - DEN1312Y *Advanced Oral Surgical Pathology I*
        - DEN2052Y *Surgical Orthodontics II*
        - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
        - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
        - DEN3004Y *Oral and Maxillofacial Surgery 4: Applied Surgical Anatomy of the Head and Neck*
        - PDE9094Y *Clinical Conferences*
        - Continue with thesis research
    - **Year 4:**
        - DEN2052Y *Surgical Orthodontics II* (audit only)
        - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
        - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
        - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
        - Continue with thesis research
    - **Years 5 and 6:**
        - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
        - Complete any outstanding core or specialty-specific coursework
        - Continue with thesis research
    - **Year 7:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 7 years full-time (typical registration sequence: Continuous)
Time Limit: 9 years full-time

PhD Program: Transfer

Transfer Requirements

- Highly qualified MSc students in the thesis option may be considered for transfer to the Dentistry PhD in the specialty of Oral and Maxillofacial Surgery. MSc students who transfer to the PhD must fulfil the admission requirements listed under the PhD program and successfully complete the transfer examination.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange students' coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
    - **Year 1:**
        - DEN1010H *Research Ethics*
        - DEN1015H *Introduction to Biostatistics*
        - DEN1101H *Introduction to Research Methods and Dissemination*

- **Years 1, 3, and 4:**
  - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Oral and Maxillofacial Surgery**, complete **21.0 required FCEs and 1.0 elective FCE** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  - **Year 1:**
    - DEN1002H *Oral Pathology*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN2051Y *Surgical Orthodontics I*
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
    - DEN3004Y *Oral and Maxillofacial Surgery 4: Applied Surgical Anatomy of the Head and Neck*
    - DEN3005H *Head and Neck Anatomy*
    - DEN3006H *Bates' Guide to Physical Examination*
    - PDE9094Y *Clinical Conferences*
    - Principles of Surgery module taken through the Department of Surgery in the Temerty Faculty of Medicine (0.0 FCE)
    - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable).
  - **Year 2:**
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery
    - Continue with thesis research
    - Successfully pass a **transfer examination** between 12 and 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
  - **Year 3:**
    - DEN2052Y *Surgical Orthodontics II*
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease* (1.0 FCE)
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery
    - DEN3004Y *Oral and Maxillofacial Surgery 4: Applied Surgical Anatomy of the Head and Neck*
    - PDE9094Y *Clinical Conferences*
    - Continue with thesis research
  - **Year 4:**
    - DEN2052Y *Surgical Orthodontics II* (audit only)
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery
    - Continue with thesis research
  - **Years 5 and 6:**
    - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
    - Complete any outstanding core or specialty-specific coursework
    - Continue with thesis research
  - **Year 7:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 7 years full-time (typical registration sequence: Continuous)
Time Limit: 9 years full-time

Dentistry: Dentistry PhD; Specialty: Oral and Maxillofacial Surgery (Effective Summer 2025)

The Dentistry PhD, Oral and Maxillofacial Surgery specialty is a seven-year full-time program. This program is available for international applicants only. Domestic applicants should refer to the combined degree program: MD/MSc in Oral and Maxillofacial Surgery. The specialty in Oral and Maxillofacial Surgery is concerned with and includes the diagnosis and surgical and adjunctive treatment of disorders, diseases, injuries, and defects, involving the functional and aesthetic aspects of the hard and soft tissues of the oral and maxillofacial regions and related structures. Clinical activities are based primarily at Mt. Sinai Hospital, Sunnybrook Health Sciences Centre, Humber River Hospital, and The Hospital for Sick Children. There is also additional participation at other University-affiliated teaching centres: Holland Bloorview Kids Rehabilitation, Lakeview Health, and the Rouge Valley Health Network.

Students start the program in the Summer session. Upon completion of all program requirements, students are eligible for the PhD degree and certification in the chosen field of dental specialty. Program completion will be contingent upon completion of all requirements for the research and specialty training components of the program.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Students are normally admitted to the PhD program with a Doctor of Dental Surgery (DDS) or equivalent, with at least an A– standing (3.7 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange the student's coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 1, 3, and 4:**
    - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Oral and Maxillofacial Surgery**, complete **21.0 required FCEs and 1.0 elective FCE** as follows:
  - **Year 1:**
    - DEN1002H *Oral Pathology*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1311Y *Oral Surgical Pathology*
    - DEN2051Y *Surgical Orthodontics I*
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
    - DEN3004Y *Oral and Maxillofacial Surgery 4: Applied Surgical Anatomy of the Head and Neck*
    - DEN3005H *Head and Neck Anatomy*
    - DEN3006H *Bates' Guide to Physical Examination*
    - PDE9094Y *Clinical Conferences*
    - Principles of Surgery module taken through the Department of Surgery in the Temerty Faculty of Medicine (0.0 FCE)
    - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
  - **Year 2:**
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
    - Continue with thesis research
    - Successfully pass a **qualifying oral examination** between 12 and 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
  - **Year 3:**
    - DEN1312Y *Advanced Oral Surgical Pathology I*
    - DEN2052Y *Surgical Orthodontics II*
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
    - DEN3004Y *Oral and Maxillofacial Surgery 4: Applied Surgical Anatomy of the Head and Neck*
    - PDE9094Y *Clinical Conferences*
    - Continue with thesis research
  - **Year 4:**
    - DEN2052Y *Surgical Orthodontics II* (audit only)
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
    - Continue with thesis research
  - **Years 5 and 6:**
    - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
    - Complete any outstanding core or specialty-specific coursework
    - Continue with thesis research
  - **Year 7:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person

Program Length: 7 years full-time (typical registration sequence: Continuous)
Time Limit: 9 years full-time

PhD Program: Transfer

Transfer Requirements

- Highly qualified MSc students in the thesis option may be considered for transfer to the Dentistry PhD in the specialty of Oral and Maxillofacial Surgery. MSc students who transfer to the PhD must fulfil the admission requirements listed under the PhD program and successfully complete the transfer examination.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange students' coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 1, 3, and 4:**
    - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Oral and Maxillofacial Surgery**, complete **21.0 required FCEs and 1.0 elective FCE** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  - **Year 1:**
    - DEN1002H *Oral Pathology*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN2051Y *Surgical Orthodontics I*
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - DEN3003Y *Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery*
    - DEN3004Y *Oral and Maxillofacial Surgery 4: Applied Surgical Anatomy of the Head and Neck*
    - DEN3005H *Head and Neck Anatomy*
    - DEN3006H *Bates' Guide to Physical Examination*
    - PDE9094Y *Clinical Conferences*
    - Principles of Surgery module taken through the Department of Surgery in the Temerty Faculty of Medicine (0.0 FCE)
    - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable).
  - **Year 2:**
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery
    - Continue with thesis research
    - Successfully pass a **transfer examination** between 12 and 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
  - **Year 3:**
    - DEN2052Y *Surgical Orthodontics II*
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease* (1.0 FCE)
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery
    - DEN3004Y *Oral and Maxillofacial Surgery 4: Applied Surgical Anatomy of the Head and Neck*
    - PDE9094Y *Clinical Conferences*
    - Continue with thesis research
  - **Year 4:**
    - DEN2052Y *Surgical Orthodontics II* (audit only)
    - DEN3001Y *Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease*
    - DEN3002Y *Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery*
    - Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery
    - Continue with thesis research
  - **Years 5 and 6:**
    - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
    - Complete any outstanding core or specialty-specific coursework
    - Continue with thesis research
  - **Year 7:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
    - Participate in all graduate research activities of the advisor's research group.
    - Present at meetings and publish original research findings in a timely fashion.
    - Participate as a member of departmental and student committees as applicable.
    - **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 7 years full-time (typical registration sequence: Continuous)
Time Limit: 9 years full-time

Dentistry: Dentistry PhD; Specialty: Oral Medicine

The Dentistry PhD, Oral Medicine specialty is a six-year full-time program. The specialty in Oral Medicine focuses on nonsurgical management of oral diseases including the management of oral mucosal and salivary gland diseases, temporomandibular disorders, and orofacial pain, the oral complications of systemic disease, and dental management of medically complex patients.

Students start the program in the Summer session. Upon completion of all program requirements, students are eligible for the PhD degree and certification in the chosen field of dental specialty. Program completion will be contingent upon completion of all requirements for the research and specialty training components of the program.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Students are normally admitted to the PhD program with a Doctor of Dental Surgery (DDS) or equivalent, with at least an A– standing (3.7 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange the student's coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 1 and 3:**
    - DEN1100H *Graduate Research Dissemination Seminars.*
- In the **specialty of Oral Medicine**, complete **7.5 required FCEs and 1.0 elective FCE** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  - **Year 1:**
    - DEN1002H *Oral Pathology*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1211Y *Oral Medicine I*
    - DEN1311Y *Oral Surgical Pathology*
    - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
  - **Year 2:**
    - DEN1212Y *Oral Medicine II*
    - DEN1312Y *Advanced Oral Surgical Pathology I*
    - Continue with thesis research
    - Successfully pass a **qualifying oral examination** between 12 and 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
  - **Year 3:**
    - DEN1213Y *Oral Medicine III*
    - DEN1313Y *Advanced Oral Surgical Pathology II*
    - Continue with thesis research
  - **Years 4 and 5:**
    - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
    - Complete any outstanding core or specialty-specific coursework
    - Continue with thesis research
  - **Year 6:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

PhD Program: Transfer

Transfer Requirements

- Highly qualified MSc students in the thesis option may be considered for transfer to the Dentistry PhD in the specialty of Oral Medicine. MSc students who transfer to the PhD must fulfil the admission requirements listed under the PhD program and successfully complete the transfer examination.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis.

After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange students' coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 1 and 3:**
    - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Oral Medicine**, complete **7.5 required FCEs and 1.0 elective FCE** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  - **Year 1:**
    - DEN1002H *Oral Pathology*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1211Y *Oral Medicine I*
    - DEN1311Y *Oral Surgical Pathology*
    - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
  - **Year 2:**
    - DEN1212Y *Oral Medicine II*
    - DEN1312Y *Advanced Oral Surgical Pathology I*
    - Continue with thesis research
    - Successfully pass a **transfer examination** between 12 and 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
  - **Year 3:**
    - DEN1213Y *Oral Medicine III* (1.0 FCE)
    - DEN1313Y *Advanced Oral Surgical Pathology II*
    - Continue with thesis research
  - **Years 4 and 5:**
    - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
    - Complete any outstanding core or specialty-specific coursework
    - Continue with thesis research
  - **Year 6:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person

Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

Dentistry: Dentistry PhD; Specialty: Orthodontics and Dentofacial Orthopedics (Effective Summer 2024)

The Dentistry PhD, Orthodontics and Dentofacial Orthopedics specialty is a six-year full-time program. The specialty in Orthodontics and Dentofacial Orthopedics is concerned with the supervision, guidance, and correction of the growing or mature dentofacial structures and the diagnosis, prevention, and treatment of any abnormalities associated with these structures.

Students start the program in the Summer session. Upon completion of all program requirements, students are eligible for the PhD degree and certification in the chosen field of dental specialty. Program completion will be contingent upon completion of all requirements for the research and specialty training components of the program.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Students are normally admitted to the PhD program with a Doctor of Dental Surgery (DDS) or equivalent, with at least an A– standing (3.7 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange the student's coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1100H *Graduate Research Dissemination Seminars*.

- In the **specialty of Orthodontics and Dentofacial Orthopedics**, complete **14.5 required FCEs and 1.0 elective FCE** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - **Year 1:**
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1060H *Craniofacial Neurophysiology: Sensory, Pain, and Neuromuscular Functions*
    - DEN2001Y *Orthodontics 1: Advanced Orthodontic Diagnosis and Treatment Planning*
    - DEN2006Y *Facial Growth and Facial Analysis*
    - DEN2010H *Tissue Reaction to Orthodontic and Orthopedic Forces*
    - DEN2041H *Interceptive Orthodontics Diagnosis and Etiology*
    - DEN2051Y *Surgical Orthodontics I*
    - DEN3005H *Head and Neck Anatomy*
    - PDE9094Y *Clinical Conferences*
    - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
  - **Year 2:**
    - DEN1016H *Occlusion: Function and Dysfunction*
    - DEN1017H *Temporomandibular Disorders*
    - DEN2002Y *Orthodontics 2: Biomechanics, Orthodontic Technique, and Practice Administration*
    - DEN2007Y *Craniofacial Anomalies*
    - DEN2009H *Classic Theories of Craniofacial Growth*
    - DEN2011Y *Craniofacial Morphology and Development*
    - DEN2042H *Interceptive Orthodontics Seminars on Interceptive and Early Treatment*
    - DEN2052Y *Surgical Orthodontics II*
    - Continue with thesis research
    - Successfully pass a **qualifying oral examination** between 12 and 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
  - **Year 3:**
    - DEN2003Y *Orthodontics 3: Orthodontic Technique and Clinical Practice*
    - DEN2043H *Interceptive Orthodontics Management and Technique*
    - PDE9094Y *Clinical Conferences*
    - Continue with thesis research
  - **Years 4 and 5:**
    - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
    - Complete any outstanding core or field-specific coursework
    - Continue with thesis research
  - **Year 6:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

PhD Program: Transfer

Transfer Requirements

- Highly qualified MSc students in the thesis option may be considered for transfer to the Dentistry PhD in the specialty of Orthodontics and Dentofacial Orthopedics. MSc students who transfer to the PhD must fulfil the admission requirements listed under the PhD program and successfully complete the transfer examination.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange students' coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Orthodontics and Dentofacial Orthopedics**, complete **14.5 required FCEs and 1.0 elective FCE** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - **Year 1:**
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1060H *Craniofacial Neurophysiology: Sensory, Pain, and Neuromuscular Functions*
    - DEN2001Y *Orthodontics 1: Advanced Orthodontic Diagnosis and Treatment Planning*
    - DEN2006Y *Facial Growth and Facial Analysis*
    - DEN2010H *Tissue Reaction to Orthodontic and Orthopedic Forces*

        - DEN2041H *Interceptive Orthodontics Diagnosis and Etiology*
        - DEN2051Y *Surgical Orthodontics I*
        - DEN3005H *Head and Neck Anatomy*
        - PDE9094Y *Clinical Conferences*
        - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
    - **Year 2:**
        - DEN1016H *Occlusion: Function and Dysfunction*
        - DEN1017H *Temporomandibular Disorders*
        - DEN2002Y *Orthodontics 2: Biomechanics, Orthodontic Technique, and Practice Administration*
        - DEN2007Y *Craniofacial Anomalies*
        - DEN2009H *Classic Theories of Craniofacial Growth*
        - DEN2011Y *Craniofacial Morphology and Development*
        - DEN2042H *Interceptive Orthodontics Seminars on Interceptive and Early Treatment*
        - DEN2052Y *Surgical Orthodontics II*
        - Continue with thesis research
        - Successfully pass a **transfer examination** between 12 and 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
    - **Year 3:**
        - DEN2003Y *Orthodontics 3: Orthodontic Technique and Clinical Practice*
        - DEN2043H *Interceptive Orthodontics Management and Technique*
        - PDE9094Y *Clinical Conferences*
        - Continue with thesis research
    - **Years 4 and 5:**
        - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
        - Complete any outstanding core or field-specific coursework
        - Continue with thesis research
    - **Year 6:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

Dentistry: Dentistry PhD; Specialty: Orthodontics and Dentofacial Orthopedics (Effective Summer 2025)

The Dentistry PhD, Orthodontics and Dentofacial Orthopedics specialty is a six-year full-time program. The specialty in Orthodontics and Dentofacial Orthopedics is concerned with the supervision, guidance, and correction of the growing or mature dentofacial structures and the diagnosis, prevention, and treatment of any abnormalities associated with these structures.

Students start the program in the Summer session. Upon completion of all program requirements, students are eligible for the PhD degree and certification in the chosen field of dental specialty. Program completion will be contingent upon completion of all requirements for the research and specialty training components of the program.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Students are normally admitted to the PhD program with a Doctor of Dental Surgery (DDS) or equivalent, with at least an A– standing (3.7 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange the student's coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
    - **Year 1:**
        - DEN1010H *Research Ethics*
        - DEN1015H *Introduction to Biostatistics*
        - DEN1101H *Introduction to Research Methods and Dissemination*
    - **Years 2 and 3:**
        - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Orthodontics and Dentofacial Orthopedics**, complete **14.75 required FCEs and 1.0 elective FCE** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.

Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
- **Year 1:**
  - DEN1007H *Oral and Maxillofacial Radiology*
  - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
  - DEN1060H *Craniofacial Neurophysiology: Sensory, Pain, and Neuromuscular Functions*
  - DEN2001Y *Orthodontics 1: Advanced Orthodontic Diagnosis and Treatment Planning*
  - DEN2006Y *Facial Growth and Facial Analysis*
  - DEN2010H *Tissue Reaction to Orthodontic and Orthopedic Forces*
  - DEN2041H *Interceptive Orthodontics Diagnosis and Etiology*
  - DEN2051Y *Surgical Orthodontics I*
  - DEN3005H *Head and Neck Anatomy*
  - PDE9094Y *Clinical Conferences*
  - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
- **Year 2:**
  - DEN1016H *Occlusion: Function and Dysfunction*
  - DEN1017H *Temporomandibular Disorders*
  - DEN2002Y *Orthodontics 2: Biomechanics, Orthodontic Technique, and Practice Administration*
  - DEN2007Y *Craniofacial Anomalies*
  - DEN2009H *Classic Theories of Craniofacial Growth*
  - DEN2011Y *Craniofacial Morphology and Development*
  - DEN2012H Molecular Basis of Craniofacial Growth
  - DEN2042H *Interceptive Orthodontics Seminars on Interceptive and Early Treatment*
  - DEN2052Y *Surgical Orthodontics II*
  - Continue with thesis research
  - Successfully pass a **qualifying oral examination** between 12 and 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
- **Year 3:**
  - DEN2003Y *Orthodontics 3: Orthodontic Technique and Clinical Practice*
  - DEN2043H *Interceptive Orthodontics Management and Technique*
  - PDE9094Y *Clinical Conferences*
  - Continue with thesis research
- **Years 4 and 5:**
  - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
  - Complete any outstanding core or field-specific coursework
  - Continue with thesis research
- **Year 6:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.

- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

PhD Program: Transfer

Transfer Requirements

- Highly qualified MSc students in the thesis option may be considered for transfer to the Dentistry PhD in the specialty of Orthodontics and Dentofacial Orthopedics. MSc students who transfer to the PhD must fulfil the admission requirements listed under the PhD program and successfully complete the transfer examination.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange students' coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Orthodontics and Dentofacial Orthopedics**, complete **14.75 required FCEs and 1.0 elective FCE** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - **Year 1:**
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1060H *Craniofacial Neurophysiology: Sensory, Pain, and Neuromuscular Functions*
    - DEN2001Y *Orthodontics 1: Advanced Orthodontic Diagnosis and Treatment Planning*
    - DEN2006Y *Facial Growth and Facial Analysis*
    - DEN2010H *Tissue Reaction to Orthodontic and Orthopedic Forces*
    - DEN2041H *Interceptive Orthodontics Diagnosis and Etiology*
    - DEN2051Y *Surgical Orthodontics I*

        - DEN3005H *Head and Neck Anatomy*
        - PDE9094Y *Clinical Conferences*
        - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
    - **Year 2:**
        - DEN1016H *Occlusion: Function and Dysfunction*
        - DEN1017H *Temporomandibular Disorders*
        - DEN2002Y *Orthodontics 2: Biomechanics, Orthodontic Technique, and Practice Administration*
        - DEN2007Y *Craniofacial Anomalies*
        - DEN2009H *Classic Theories of Craniofacial Growth*
        - DEN2011Y *Craniofacial Morphology and Development*
        - DEN2012H Molecular Basis of Craniofacial Growth
        - DEN2042H *Interceptive Orthodontics Seminars on Interceptive and Early Treatment*
        - DEN2052Y *Surgical Orthodontics II*
        - Continue with thesis research
        - Successfully pass a **transfer examination** between 12 and 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
    - **Year 3:**
        - DEN2003Y *Orthodontics 3: Orthodontic Technique and Clinical Practice*
        - DEN2043H *Interceptive Orthodontics Management and Technique*
        - PDE9094Y *Clinical Conferences*
        - Continue with thesis research
    - **Years 4 and 5:**
        - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
        - Complete any outstanding core or field-specific coursework
        - Continue with thesis research
    - **Year 6:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

Dentistry: Dentistry PhD; Specialty: Pediatric Dentistry (Effective Summer 2024)

The Dentistry PhD, Pediatric Dentistry specialty is a six-year full-time program. Pediatric dentists provide primary and comprehensive preventive and therapeutic oral health diagnosis, care, and consultative expertise for infants and children through adolescence, including those of all ages with special care needs. The didactic program is centered at the Faculty of Dentistry, while the clinical program will be divided between the Faculty of Dentistry, the University-affiliated teaching hospitals and community-based Toronto Public Health dental clinic.

Students start the program in the Summer session. Upon completion of all program requirements, students are eligible for the PhD degree and certification in the chosen field of dental specialty. Program completion will be contingent upon completion of all requirements for the research and specialty training components of the program.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Students are normally admitted to the PhD program with a Doctor of Dental Surgery (DDS) or equivalent, with at least an A– standing (3.7 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange the student's coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
    - **Year 1:**
        - DEN1010H *Research Ethics*
        - DEN1015H *Introduction to Biostatistics*
        - DEN1101H *Introduction to Research Methods and Dissemination*
    - **Years 2 and 3:**
        - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Pediatric Dentistry**, complete **23.0 required FCEs and 1.0 elective FCE** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.

Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.

- **Year 1:**
  - DEN1002H *Oral Pathology*
  - DEN1003H *Preventive Dentistry*
  - DEN1007H *Oral and Maxillofacial Radiology*
  - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
  - DEN1062H *Pharmacology of Dental Therapeutics*
  - DEN1090H *Inhalation and Oral Minimal and Moderate Sedation for Dental Procedures*
  - DEN2007Y *Craniofacial Anomalies*
  - DEN4003Y *Pediatric Dentistry 3: Facial and Dental Growth and Development in Pediatric Dentistry*
  - DEN4004H *Pediatric Dentistry 4: Child Behaviour Management*
  - DEN4006Y *Pediatric Dentistry 6: Oral and Maxillofacial Surgery as Applied to Pediatric Dentistry*
  - DEN4007H *Pulp Therapy and Trauma*
  - DEN4009Y *Pediatrics*
  - DEN4010Y *Care of Patients With Special Health Care Needs*
  - DEN4011Y *Conscious Sedation and Anaesthesia in Pediatric Dentistry*
  - DEN4012Y *Clinical Pediatric Dentistry I*
  - DEN4101Y *Pediatric Dentistry Theory I*
  - DEN4201Y *Pediatric Dentistry Journal/Literature Review I*
  - DEN4801Y *Orthodontics for Pediatric Dentistry I*
  - PDE9094Y *Clinical Conferences*
  - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
- **Year 2:**
  - DEN1070H *Advances in Dental Materials Science*
  - DEN4013Y *Clinical Pediatric Dentistry II*
  - DEN4102Y *Pediatric Dentistry Theory II*
  - DEN4202Y *Pediatric Dentistry Journal/Literature Review II*
  - DEN4802Y *Orthodontics for Pediatric Dentistry II*
  - PDE9094Y *Clinical Conferences*
  - Continue with thesis research
  - Successfully pass a **qualifying oral examination** between 12 and 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
- **Year 3:**
  - DEN4014Y *Clinical Pediatric Dentistry III*
  - DEN4103Y *Pediatric Dentistry Theory III*
  - DEN4203Y *Pediatric Dentistry Journal/Literature Review III*
  - DEN4803Y *Orthodontics for Pediatric Dentistry III*
  - Continue with thesis research
- **Years 4 and 5:**
  - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
  - Complete any outstanding core or field-specific coursework
  - Continue with thesis research
- **Year 6:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.

- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

PhD Program: Transfer

Transfer Requirements

- Highly qualified MSc students in the thesis option may be considered for transfer to the Dentistry PhD in the specialty of Pediatric Dentistry. MSc students who transfer to the PhD must fulfil the admission requirements listed under the PhD program and successfully complete the transfer examination.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange students' coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Pediatric Dentistry**, complete **23.0 required FCEs and 1.0 elective FCE** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - **Year 1:**
    - DEN1002H *Oral Pathology*
    - DEN1003H *Preventive Dentistry*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*

        - DEN1062H *Pharmacology of Dental Therapeutics*
        - DEN1090H *Inhalation and Oral Minimal and Moderate Sedation for Dental Procedures*
        - DEN2007Y *Craniofacial Anomalies*
        - DEN4003Y *Pediatric Dentistry 3: Facial and Dental Growth and Development in Pediatric Dentistry*
        - DEN4004H *Pediatric Dentistry 4: Child Behaviour Management*
        - DEN4006Y *Pediatric Dentistry 6: Oral and Maxillofacial Surgery as Applied to Pediatric Dentistry*
        - DEN4007H *Pulp Therapy and Trauma*
        - DEN4009Y *Pediatrics*
        - DEN4010Y *Care of Patients With Special Health Care Needs*
        - DEN4011Y *Conscious Sedation and Anaesthesia in Pediatric Dentistry*
        - DEN4012Y *Clinical Pediatric Dentistry I*
        - DEN4101Y *Pediatric Dentistry Theory I*
        - DEN4201Y *Pediatric Dentistry Journal/Literature Review I*
        - DEN4801Y *Orthodontics for Pediatric Dentistry I*
        - PDE9094Y *Clinical Conferences*
        - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
    - **Year 2:**
        - DEN1070H *Advances in Dental Materials Science*
        - DEN4013Y *Clinical Pediatric Dentistry II*
        - DEN4102Y *Pediatric Dentistry Theory II*
        - DEN4202Y *Pediatric Dentistry Journal/Literature Review II*
        - DEN4802Y *Orthodontics for Pediatric Dentistry II*
        - PDE9094Y *Clinical Conferences*
        - Continue with thesis research
        - Successfully pass a **transfer examination** between 12 and 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
    - **Year 3:**
        - DEN4014Y *Clinical Pediatric Dentistry III*
        - DEN4103Y *Pediatric Dentistry Theory III*
        - DEN4203Y *Pediatric Dentistry Journal/Literature Review III*
        - DEN4803Y *Orthodontics for Pediatric Dentistry III*
        - Continue with thesis research
    - **Years 4 and 5:**
        - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
        - Complete any outstanding core or field-specific coursework
        - Continue with thesis research
    - **Year 6:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

Dentistry: Dentistry PhD; Specialty: Pediatric Dentistry (Effective Summer 2025)

The Dentistry PhD, Pediatric Dentistry specialty is a six-year full-time program. Pediatric dentists provide primary and comprehensive preventive and therapeutic oral health diagnosis, care, and consultative expertise for infants and children through adolescence, including those of all ages with special care needs. The didactic program is centered at the Faculty of Dentistry, while the clinical program will be divided between the Faculty of Dentistry, the University-affiliated teaching hospitals and community-based Toronto Public Health dental clinic.

Students start the program in the Summer session. Upon completion of all program requirements, students are eligible for the PhD degree and certification in the chosen field of dental specialty. Program completion will be contingent upon completion of all requirements for the research and specialty training components of the program.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Students are normally admitted to the PhD program with a Doctor of Dental Surgery (DDS) or equivalent, with at least an A– standing (3.7 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange the student's coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
    - **Year 1:**
        - DEN1010H *Research Ethics*

        - DEN1015H *Introduction to Biostatistics*
        - DEN1101H *Introduction to Research Methods and Dissemination*
    - **Years 2 and 3:**
        - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Pediatric Dentistry**, complete **22.75 required FCEs and 1.0 elective FCE** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
    - **Year 1:**
        - DEN1002H *Oral Pathology*
        - DEN1003H *Preventive Dentistry*
        - DEN1007H *Oral and Maxillofacial Radiology*
        - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
        - DEN1062H *Pharmacology of Dental Therapeutics*
        - DEN1090H *Inhalation and Oral Minimal and Moderate Sedation for Dental Procedures*
        - DEN2007Y *Craniofacial Anomalies*
        - DEN2012H Molecular Basis of Craniofacial Growth
        - DEN4003H Craniofacial Growth and Development in Utero to Adolescence
        - DEN4004H *Pediatric Dentistry 4: Child Behaviour Management*
        - DEN4006Y *Pediatric Dentistry 6: Oral and Maxillofacial Surgery as Applied to Pediatric Dentistry*
        - DEN4007H *Pulp Therapy and Trauma*
        - DEN4009Y *Pediatrics*
        - DEN4010Y *Care of Patients With Special Health Care Needs*
        - DEN4011Y *Conscious Sedation and Anaesthesia in Pediatric Dentistry*
        - DEN4012Y *Clinical Pediatric Dentistry I*
        - DEN4101Y *Pediatric Dentistry Theory I*
        - DEN4201Y *Pediatric Dentistry Journal/Literature Review I*
        - DEN4801Y *Orthodontics for Pediatric Dentistry I*
        - PDE9094Y *Clinical Conferences*
        - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
    - **Year 2:**
        - DEN1070H *Advances in Dental Materials Science*
        - DEN4013Y *Clinical Pediatric Dentistry II*
        - DEN4102Y *Pediatric Dentistry Theory II*
        - DEN4202Y *Pediatric Dentistry Journal/Literature Review II*
        - DEN4802Y *Orthodontics for Pediatric Dentistry II*
        - PDE9094Y *Clinical Conferences*
        - Continue with thesis research
        - Successfully pass a **qualifying oral examination** between 12 and 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
    - **Year 3:**
        - DEN4014Y *Clinical Pediatric Dentistry III*
        - DEN4103Y *Pediatric Dentistry Theory III*
        - DEN4203Y *Pediatric Dentistry Journal/Literature Review III*
        - DEN4803Y *Orthodontics for Pediatric Dentistry III*
        - Continue with thesis research
    - **Years 4 and 5:**
        - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
        - Complete any outstanding core or field-specific coursework
        - Continue with thesis research
    - **Year 6:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

PhD Program: Transfer

Transfer Requirements

- Highly qualified MSc students in the thesis option may be considered for transfer to the Dentistry PhD in the specialty of Pediatric Dentistry. MSc students who transfer to the PhD must fulfil the admission requirements listed under the PhD program and successfully complete the transfer examination.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange students' coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
    - **Year 1:**
        - DEN1010H *Research Ethics*
        - DEN1015H *Introduction to Biostatistics*
        - DEN1101H *Introduction to Research Methods and Dissemination*
    - **Years 2 and 3:**
        - DEN1100H *Graduate Research Dissemination Seminars*.

- In the **specialty of Pediatric Dentistry**, complete **22.75 required FCEs and 1.0 elective FCE** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - **Year 1:**
    - DEN1002H *Oral Pathology*
    - DEN1003H *Preventive Dentistry*
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1062H *Pharmacology of Dental Therapeutics*
    - DEN1090H *Inhalation and Oral Minimal and Moderate Sedation for Dental Procedures*
    - DEN2007Y *Craniofacial Anomalies*
    - DEN2012H Molecular Basis of Craniofacial Growth
    - DEN4003H Craniofacial Growth and Development in Utero to Adolescence
    - DEN4004H *Pediatric Dentistry 4: Child Behaviour Management*
    - DEN4006Y *Pediatric Dentistry 6: Oral and Maxillofacial Surgery as Applied to Pediatric Dentistry*
    - DEN4007H *Pulp Therapy and Trauma*
    - DEN4009Y *Pediatrics*
    - DEN4010Y *Care of Patients With Special Health Care Needs*
    - DEN4011Y *Conscious Sedation and Anaesthesia in Pediatric Dentistry*
    - DEN4012Y *Clinical Pediatric Dentistry I*
    - DEN4101Y *Pediatric Dentistry Theory I*
    - DEN4201Y *Pediatric Dentistry Journal/Literature Review I*
    - DEN4801Y *Orthodontics for Pediatric Dentistry I*
    - PDE9094Y *Clinical Conferences*
    - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
  - **Year 2:**
    - DEN1070H *Advances in Dental Materials Science*
    - DEN4013Y *Clinical Pediatric Dentistry II*
    - DEN4102Y *Pediatric Dentistry Theory II*
    - DEN4202Y *Pediatric Dentistry Journal/Literature Review II*
    - DEN4802Y *Orthodontics for Pediatric Dentistry II*
    - PDE9094Y *Clinical Conferences*
    - Continue with thesis research
    - Successfully pass a **transfer examination** between 12 and 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
  - **Year 3:**
    - DEN4014Y *Clinical Pediatric Dentistry III*
    - DEN4103Y *Pediatric Dentistry Theory III*
    - DEN4203Y *Pediatric Dentistry Journal/Literature Review III*
    - DEN4803Y *Orthodontics for Pediatric Dentistry III*
    - Continue with thesis research
  - **Years 4 and 5:**
    - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
    - Complete any outstanding core or field-specific coursework
    - Continue with thesis research
  - **Year 6:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

Dentistry: Dentistry PhD; Specialty: Periodontics

The Dentistry PhD, Periodontics specialty is a six-year full-time program. The specialty in Periodontics is concerned with the diagnosis, prevention, and treatment of diseases and conditions of the supporting and surrounding tissues of the teeth or their substitutes and the maintenance of the health, function, and aesthetics of these structures and tissues.

Students start the program in the Summer session. Upon completion of all program requirements, students are eligible for the PhD degree and certification in the chosen field of dental specialty. Program completion will be contingent upon completion of all requirements for the research and specialty training components of the program.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Students are normally admitted to the PhD program with a Doctor of Dental Surgery (DDS) or equivalent, with at least an A– standing (3.7 out of 4.0 grade point average [GPA]) in the final year from a recognized university.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange the student's coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Periodontics**, complete **18.0 required FCEs and 1.0 elective FCE** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - **Year 1:**
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1033Y *Periodontology: Seminars and Clinics I*
    - DEN1070H *Advances in Dental Materials Science*
    - DEN1090H *Inhalation and Oral Minimal and Moderate Sedation for Dental Procedures*
    - DEN6061Y *Literature Review in Periodontics I*
    - DEN6091Y *Principles and Practice of Periodontics I*
    - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
  - **Year 2:**
    - DEN1002H *Oral Pathology*
    - DEN1022H *Investigating Pathogenic Biofilms*
    - DEN1034Y *Periodontology: Seminars and Clinics II*
    - DEN1091Y *Parenteral Moderate Sedation for Dental Procedures*
    - DEN6062Y *Literature Review in Periodontics II*
    - DEN6071Y *Clinical Case Presentation I*
    - DEN6081Y *Biomaterials and Implant/Reconstructive Dentistry I*
    - DEN6092Y *Principles and Practice of Periodontics II*
    - PDE9094Y *Clinical Conferences*
    - Continue with thesis research
    - Successfully pass a **qualifying oral examination** within 12 to 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
  - **Year 3:**
    - DEN1035Y *Periodontology: Seminars and Clinics III*
    - DEN1311Y *Oral Surgical Pathology*
    - DEN6072Y *Clinical Case Presentation II*
    - DEN6082Y *Biomaterials and Implant/Reconstructive Dentistry II*
    - DEN6093Y *Principles and Practice of Periodontics III*
    - PDE9094Y *Clinical Conferences*
    - Continue with thesis research
  - **Years 4 and 5:**
    - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
    - Complete any outstanding core or field-specific coursework
    - Continue with thesis research
  - **Year 6:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

PhD Program: Transfer

Transfer Requirements

- Highly qualified MSc students in the thesis option may be considered for transfer to the Dentistry PhD in the specialty of Periodontics. MSc students who transfer to the PhD must fulfil the admission requirements listed under the PhD program and successfully complete the transfer examination.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange students' coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*

    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Periodontics**, complete **18.0 required FCEs and 1.0 elective FCE** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - **Year 1:**
    - DEN1007H *Oral and Maxillofacial Radiology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1033Y *Periodontology: Seminars and Clinics I*
    - DEN1070H *Advances in Dental Materials Science*
    - DEN1090H *Inhalation and Oral Minimal and Moderate Sedation for Dental Procedures*
    - DEN6061Y *Literature Review in Periodontics I*
    - DEN6091Y *Principles and Practice of Periodontics I*
    - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
  - **Year 2:**
    - DEN1002H *Oral Pathology*
    - DEN1022H *Investigating Pathogenic Biofilms*
    - DEN1034Y *Periodontology: Seminars and Clinics II*
    - DEN1091Y *Parenteral Moderate Sedation for Dental Procedures*
    - DEN6062Y *Literature Review in Periodontics II*
    - DEN6071Y *Clinical Case Presentation I*
    - DEN6081Y *Biomaterials and Implant/Reconstructive Dentistry I*
    - DEN6092Y *Principles and Practice of Periodontics II*
    - PDE9094Y *Clinical Conferences*
    - Continue with thesis research
    - Successfully pass a **transfer examination** within 12 to 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
  - **Year 3:**
    - DEN1035Y *Periodontology: Seminars and Clinics III*
    - DEN1311Y *Oral Surgical Pathology*
    - DEN6072Y *Clinical Case Presentation II*
    - DEN6082Y *Biomaterials and Implant/Reconstructive Dentistry II*
    - DEN6093Y *Principles and Practice of Periodontics III*
    - PDE9094Y *Clinical Conferences*
    - Continue with thesis research
  - **Years 4 and 5:**
    - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
    - Complete any outstanding core or field-specific coursework
    - Continue with thesis research
  - **Year 6:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

Dentistry: Dentistry PhD; Specialty: Prosthodontics

The Dentistry PhD, Prosthodontics specialty is a six-year full-time program. This specialty is designed to prepare students for careers in the specialty of prosthodontics with particular emphasis on developing clinical teachers and researchers. Extensive clinical training is provided under close supervision in the Faculty of Dentistry Prosthodontics and the Implant Prosthodontic Unit. Strong surgical, communication, and interpersonal skills are developed in addition to the core prosthodontic skills.

Upon completion of all program requirements, students are eligible for the PhD degree and certification in the chosen field of dental specialty. Program completion will be contingent upon completion of all requirements for the research and specialty training components of the program.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Dentistry's additional admission requirements stated below.
- Students are normally admitted to the PhD program with an appropriate master's degree, or equivalent, with at least an A– standing (3.7 out of 4.0 grade point average [GPA]) in the final year from a recognized university in a discipline appropriate to the intended field of doctoral study.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and

arrange the student's coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.

- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
  - **Year 2:**
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Prosthodontics**, complete **20.0 required FCEs and 1.0 elective FCE** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.
  Note: course timing may vary between years. Please contact gradstudies@dentistry.utoronto.ca for details.
  - **Year 1:**
    - DEN1007H *Oral Radiology*
    - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
    - DEN1016H *Occlusion: Function and Dysfunction*
    - DEN1017H *Temporomandibular Disorders*
    - DEN1042Y *Prosthodontics II: Key Concepts in Prosthodontics and Laboratory Management*
    - DEN1060H *Craniofacial Neurophysiology: Sensory, Pain, and Neuromuscular Functions*
    - DEN1090H *Inhalation and Oral Minimal and Moderate Sedation for Dental Procedures*
    - DEN3005H *Head and Neck Anatomy*
    - DEN7011Y *Prosthodontic Treatment Planning*
    - DEN7031Y *Prosthodontic Topical Seminars I*
    - DEN7041Y *Prosthodontic Current Literature I*
    - DEN7051Y *Prosthodontics and Implant Surgery I*
    - DEN7061Y *Clinical Prosthodontics I*
    - Develop a **thesis proposal**, form a **supervisory committee**, and complete an **ethics review** (if applicable)
  - **Year 2:**
    - DEN1070H *Advances in Dental Materials Sciences*
    - DEN7012Y *Prosthodontic Case Presentations I*
    - DEN7032Y *Prosthodontic Topical Seminars II*
    - DEN7042Y *Prosthodontic Current Literature II*
    - DEN7052Y *Prosthodontics and Implant Surgery II*
    - DEN7062Y *Clinical Prosthodontics II*
    - Continue with thesis research
    - Successfully pass a **qualifying oral examination** within 12 to 24 months to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
  - **Year 3:**
    - DEN7013Y *Prosthodontic Case Presentations II*
    - DEN7033Y *Prosthodontic Topical Seminars III*
    - DEN7043Y *Prosthodontic Current Literature III*
    - DEN7063Y *Clinical Prosthodontics III*
    - PDE9094Y *Clinical Conferences*
    - Continue with thesis research
  - **Years 4 and 5:**
    - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
    - Complete any outstanding core or field-specific coursework
    - Continue with thesis research
  - **Year 6:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.
    - Participate in all graduate research activities of the advisor's research group.
    - Present at meetings and publish original research findings in a timely fashion.
    - Participate as a member of departmental and student committees as applicable.
    - **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

PhD Program: Transfer

Transfer Requirements

- Highly qualified MSc students in the thesis option may be considered for transfer to the Dentistry PhD in the specialty of Prosthodontics. MSc students who transfer to the PhD must fulfil the admission requirements listed under the PhD program and successfully complete the transfer examination.

Completion Requirements

- Students undertake a customized program, approved by an advisory committee and the Associate Dean, Graduate Education, comprising advanced study and original research culminating in the defence of a thesis. After consultation with the Associate Dean, Graduate Education, a committee will be appointed to plan and arrange students' coursework and research programs, approve the course of study, and monitor progress as part of an annual report to the Associate Dean for approval and continuance of candidacy.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs) and a thesis** as follows:
  - **Year 1:**
    - DEN1010H *Research Ethics*
    - DEN1015H *Introduction to Biostatistics*
  - **Year 2:**
    - DEN1101H *Introduction to Research Methods and Dissemination*
  - **Years 2 and 3:**
    - DEN1100H *Graduate Research Dissemination Seminars*.
- In the **specialty of Prosthodontics**, complete **20.0 required FCEs and 1.0 elective FCE** as follows. Students have the option to take DEN1008H *Cone Beam CT Imaging*, in addition to the total FCEs required for the specialty.

- **Year 1:**
  - DEN1007H *Oral Radiology*
  - DEN1014H *Clinical Epidemiology and Evidence-Based Care*
  - DEN1016H *Occlusion: Function and Dysfunction*
  - DEN1017H *Temporomandibular Disorders*
  - DEN1042Y *Prosthodontics II: Key Concepts in Prosthodontics and Laboratory Management*
  - DEN1060H *Craniofacial Neurophysiology: Sensory, Pain, and Neuromuscular Functions*
  - DEN1090H Inhalation and Oral Minimal and Moderate Sedation for Dental Procedures
  - DEN3005H Head and Neck Anatomy
  - DEN7011Y Prosthodontic Treatment Planning
  - DEN7031Y Prosthodontic Topical Seminars I
  - DEN7041Y Prosthodontic Current Literature I
  - DEN7051Y Prosthodontics and Implant Surgery I
  - DEN7061Y Clinical Prosthodontics I
  - Develop a thesis proposal, form a supervisory committee, and complete an ethics review (if applicable)
- **Year 2:**
  - DEN1070H *Advances in Dental Materials Sciences*
  - DEN7012Y *Prosthodontic Case Presentations I*
  - DEN7032Y *Prosthodontic Topical Seminars II*
  - DEN7042Y *Prosthodontic Current Literature II*
  - DEN7052Y *Prosthodontics and Implant Surgery II*
  - DEN7062Y *Clinical Prosthodontics II*
  - Continue with thesis research
  - Successfully pass a **transfer examination** to demonstrate an adequate capacity for oral health sciences research through previous work. Students will be examined on their thesis proposal and breadth of knowledge relative to the research project.
- **Year 3:**
  - DEN7013Y *Prosthodontic Case Presentations II*
  - DEN7033Y *Prosthodontic Topical Seminars III*
  - DEN7043Y *Prosthodontic Current Literature III*
  - DEN7063Y *Clinical Prosthodontics III*
  - PDE9094Y *Clinical Conferences*
  - Continue with thesis research
- **Years 4 and 5:**
  - 1.0 elective FCE in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice
  - Complete any outstanding core or field-specific coursework
  - Continue with thesis research
- **Year 6:** Successfully submit and defend the thesis at the **Doctoral Final Oral Examination**.

- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in a timely fashion.
- Participate as a member of departmental and student committees as applicable.
- **Residency.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

Dentistry: Dentistry MSc, PhD Courses

Not all courses are offered every year. The Faculty of Dentistry should be consulted each session as to course offerings. Required courses vary by specialty.

Please contact the Graduate Department for details.

Core Courses

Course Code	Course Title
DEN1001H	Graduate Research Dissemination Seminars
DEN1010H	Research Ethics
DEN1015H	Introduction to Biostatistics
DEN1100H	Graduate Research Dissemination Seminars
DEN1101H	Introduction to Research Methods and Dissemination

General Courses

Course Code	Course Title
DEN1009H	Pain: From Basic Science to Patient Care
DEN1014H	Clinical Epidemiology and Evidence-Based Care
DEN1022H	Investigating Pathogenic Biofilms
DEN1060H	Craniofacial Neurophysiology: Sensory, Pain, and Neuromuscular Functions
DEN1070H	Advances in Dental Materials Science
DEN1081H	Bone Interfacing Implants
DEN1098H	Reading Course in Oral Health Sciences

Courses for Students in MSc or PhD Dental Specialties

Course Code	Course Title
CHL5004H	Introduction to Public Health Sciences
DEN1002H	Oral Pathology
DEN1003H	Preventive Dentistry
DEN1006Y	Seminars in Dental Public Health
DEN1007H	Oral and Maxillofacial Radiology
DEN1008H	Cone Beam CT Imaging
DEN1014H	Clinical Epidemiology and Evidence-Based Care

Course Code	Course Title
DEN1016H	Occlusion: Function and Dysfunction
DEN1017H	Temporomandibular Disorders
DEN1022H	Investigating Pathogenic Biofilms
DEN1033Y	Periodontology: Seminars and Clinics I
DEN1034Y	Periodontology: Seminars and Clinics II
DEN1035Y	Periodontology: Seminars and Clinics III
DEN1042Y	Restorative Dentistry and Laboratory Procedures
DEN1051Y	Oral Epidemiology
DEN1052H	General Anaesthesia for Medical Procedures — Pediatric
DEN1052Y	General Anaesthesia for Medical Procedures — Pediatric
DEN1055H	Basic Principles of Dental Anaesthesia
DEN1056Y	Basic Concepts in Clinical Medicine
DEN1060H	Craniofacial Neurophysiology
DEN1061H	Research Practicum
DEN1062H	Pharmacology of Dental Therapeutics
DEN1063Y	Practicum in Dental Public Health
DEN1064H	Management Principles in Canadian Dental Health Organizations
DEN1070H	Advances in Dental Materials Science
DEN1071H	Medical Anaesthesia Seminars I
DEN1072H	Medical Anaesthesia Seminars II
DEN1073Y	Dental Anaesthesia Graduate Seminars
DEN1074Y	Foundations of Medicine as Applied to Dental Anaesthesia
DEN1075Y	General Anaesthesia for Dentistry — Pediatric
DEN1076H	General Anaesthesia for Medical Procedures — Adult I
DEN1077H	General Anaesthesia for Medical Procedures — Adult II
DEN1078H	General Anaesthesia for Dental Procedures — Adult I
DEN1079H	General Anaesthesia for Dental Procedures — Adult II
DEN1083Y	Experiences in Clinical Medicine
DEN1084H	Experiences in Clinical Teaching I
DEN1085H	Experiences in Clinical Teaching II
DEN1086H	Experiences in Clinical Teaching III
DEN1087Y	Fundamentals of Dental Anaesthesia

Course Code	Course Title
DEN1088Y	Fundamentals of Dental Anaesthesia II
DEN1089Y	Fundamentals of Dental Anaesthesia III
DEN1090H	Inhalation and Oral Minimal and Moderate Sedation for Dental Procedures
DEN1091Y	Parenteral Moderate Sedation for Dental Procedures
DEN1094Y	Advanced Oral and Maxillofacial Radiology I
DEN1095Y	Advanced Oral and Maxillofacial Radiology Radiology II
DEN1096Y	Advanced Oral and Maxillofacial Radiology Radiology III
DEN1111Y	Advanced Oral and Maxillofacial Pathology I
DEN1112Y	Advanced Oral and Maxillofacial Pathology II
DEN1113Y	Advanced Oral and Maxillofacial Pathology III
DEN1211Y	Oral Medicine I
DEN1212Y	Oral Medicine II
DEN1213Y	Oral Medicine III
DEN1311Y	Oral Surgical Pathology
DEN1312Y	Advanced Oral Surgical Pathology I
DEN1313Y	Advanced Oral Surgical Pathology II
DEN2001Y	Orthodontics 1: Advanced Orthodontic Diagnosis and Treatment Planning
DEN2002Y	Orthodontics 2: Biomechanics Orthodontic Technique and Practice Administration
DEN2003Y	Orthodontics 3: Orthodontic Technique and Clinical Practice
DEN2006Y	Facial Growth and Facial Analysis
DEN2007Y	Craniofacial Anomalies
DEN2009H	Classic Theories of Craniofacial Growth
DEN2010H	Tissue Reaction to Orthodontic and Orthopedic Forces
DEN2011Y	Craniofacial Morphology and Development
DEN2012H	Molecular Basis of Craniofacial Growth
DEN2041H	Interceptive Orthodontics Diagnosis and Etiology
DEN2042H	Interceptive Orthodontics Seminars on Interceptive and Early Treatment
DEN2043H	Interceptive Orthodontics Management and Technique
DEN2051Y	Surgical Orthodontics I
DEN2052Y	Surgical Orthodontics II

Course Code	Course Title
DEN3001Y	Oral and Maxillofacial Surgery 1: The Physiologic Basis of Disease
DEN3002Y	Oral and Maxillofacial Surgery 2: Principles and Practice of Oral and Maxillofacial Surgery
DEN3003Y	Oral and Maxillofacial Surgery 3: Evidence-Based Literature Reviews in Oral and Maxillofacial Surgery
DEN3004Y	Oral and Maxillofacial Surgery 4: Applied Surgical Anatomy of the Head and Neck
DEN3005H	Head and Neck Anatomy
DEN3006H	Bates' Guide to Physical Examination
DEN4003H	Craniofacial Growth and Development in Utero to Adolescence
DEN4003Y	Pediatric Dentistry 3: Facial and Dental Growth and Development in Pediatric Dentistry
DEN4004H	Pediatric Dentistry 4: Child Behaviour Management
DEN4005Y	Pediatric Dentistry 5: Clinical Pediatric Dentistry
DEN4006Y	Pediatric Dentistry 6: Oral and Maxillofacial Surgery as Applied to Pediatric Dentistry
DEN4007H	Pulp Therapy and Trauma
DEN4009Y	Pediatrics
DEN4010Y	Care of Patients With Special Health Care Needs
DEN4011Y	Conscious Sedation and Anaesthesia in Pediatric Dentistry
DEN4012Y	Clinical Pediatric Dentistry I
DEN4013Y	Clinical Pediatric Dentistry II
DEN4014Y	Clinical Pediatric Dentistry III
DEN4101Y	Pediatric Dentistry Theory I
DEN4102Y	Pediatric Dentistry Theory II
DEN4103Y	Pediatric Dentistry Theory III
DEN4201Y	Pediatric Dentistry Journal/Literature Review I
DEN4202Y	Pediatric Dentistry Journal/Literature Review II
DEN4203Y	Pediatric Dentistry Journal/Literature Review III
DEN4801Y	Orthodontics for Pediatric Dentistry I
DEN4802Y	Orthodontics for Pediatric Dentistry II
DEN4803Y	Orthodontics for Pediatric Dentistry III
DEN5011Y	Graduate Endodontics Case Presentation I
DEN5012Y	Graduate Endodontics Case Presentation II
DEN5013Y	Graduate Endodontics Case Presentation III

Course Code	Course Title
DEN5021Y	Graduate Endodontics Topical Literature 1
DEN5022Y	Graduate Endodontics Topical Literature 2
DEN5031Y	Endodontics Current Literature Seminar 1
DEN5032Y	Endodontics Current Literature Seminar 2
DEN5033Y	Endodontics Current Literature Seminar 3
DEN5004Y	Single Tooth Replacements with Implant-Supported Prosthesis
DEN5005H	Introduction to Graduate Endodontics
DEN5091Y	Endodontic Clinic 1
DEN5092Y	Endodontic Clinic 2
DEN5093Y	Endodontic Clinic 3
DEN6061Y	Literature Review in Periodontics I
DEN6062Y	Literature Review in Periodontics II
DEN6071Y	Clinical Case Presentation I
DEN6072Y	Clinical Case Presentation II
DEN6081Y	Biomaterials and Implant/Reconstructive Dentistry I
DEN6082Y	Biomaterials and Implant/Reconstructive Dentistry II
DEN6091Y	Principles and Practice of Periodontics I
DEN6092Y	Principles and Practice of Periodontics II
DEN6093Y	Principles and Practice of Periodontics III
DEN7011Y	Prosthodontic Treatment Planning
DEN7012Y	Prosthodontic Case Presentations I
DEN7013Y	Prosthodontic Case Presentations II
DEN7031Y	Prosthodontic Topical Seminars I
DEN7032Y	Prosthodontic Topical Seminars II
DEN7033Y	Prosthodontic Topical Seminars III
DEN7041Y	Prosthodontic Current Literature I
DEN7042Y	Prosthodontic Current Literature II
DEN7043Y	Prosthodontic Current Literature III
DEN7051Y	Prosthodontics and Surgery I
DEN7052Y	Prosthodontics and Surgery II
DEN7061Y	Clinical Prosthodontics I
DEN7062Y	Clinical Prosthodontics II
DEN7063Y	Clinical Prosthodontics III
LMP1300Y	General and Special Pathology
PDE9094Y	Clinical Conferences

Course Code	Course Title
RST9999Y	Research/Thesis

Drama, Theatre and Performance Studies

Drama, Theatre and Performance Studies: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Drama, Theatre and Performance Studies

MA and PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Diaspora and Transnational Studies**
  - Drama, Theatre and Performance Studies, MA, PhD
- **Jewish Studies**
  - Drama, Theatre and Performance Studies, MA, PhD
- **Knowledge Media Design**
  - Drama, Theatre and Performance Studies, MA, PhD
- **Sexual Diversity Studies**
  - Drama, Theatre and Performance Studies, MA, PhD
- **South Asian Studies**
  - Drama, Theatre and Performance Studies, MA, PhD
- **Women and Gender Studies**
  - Drama, Theatre and Performance Studies, MA, PhD

Overview

The Centre for Drama, Theatre and Performance Studies offers graduate programs leading to the **Master of Arts** and **Doctor of Philosophy** degrees. The centre's own core courses focus on the program fields of dramaturgy, theatre history, and theory of drama. Within the parameters of these fields, the centre supports research in such areas as performance analysis and reception; Canadian, American, international, and intercultural theatre; Elizabethan and Restoration staging practices; historiography and performance; acting and modern staging theories and practices; performance aesthetics and politics; as well as play and project development.

A new aspect in the curriculum focuses on the impact of digital culture on theatre practice and research. Through affiliations with other graduate units, students may also take courses in drama, theatre, and performance from other departments, centres, and institutes across the University. Graduate students build on the foundation that would normally be laid in undergraduate studies with a concentration in theatre, drama, and performance studies. Performance practice is an integral part of graduate work in the centre and it takes place, for the most part, at the Robert Gill Theatre and the Luella Massey Studio Theatre.

For more information on application details, courses and faculty members, visit the departmental website.

Contact and Address

Web: www.cdtps.utoronto.ca
General email: graduate.drama@utoronto.ca
Associate Director of Graduate Studies:
gc.graddrama@utoronto.ca
Telephone: (416) 978-7980

Centre for Drama, Theatre and Performance Studies
University of Toronto, UC Union Building
79 St. George Street, 3rd Floor, Room 302
Toronto, Ontario M5S 2E5 Canada

Drama, Theatre and Performance Studies: Graduate Faculty

Full Members

Budde, Antje - PhD
Carter, Jill - DPhil
Cobb, Michael - BA, AM, MA, PhD
Fan, Xing - PhD ***(Associate Director)***
Freeman, Barry - BA, MA, PhD
Gallagher-Ross, Jacob - BA, MFA, DFA
Gallagher, Kathleen Marie - PhD ***(Director)***
Kleber, Pia - BA, MA, MA, PhD
Schotzko, T. Nikki Cesare - PhD
Switzky, Lawrence - BA, MA, PhD
Syme, Holger Schott - BA, AM, PhD
Trojanowska, Tamara - MA, PhD

Members Emeriti

Copeland, Nancy - BA, MA, PhD
Johnson, Stephen - BA, MA, PhD
Pietropaolo, Domenico - BSc, MA, PhD

Associate Members

Banerjee, Trina Nileena - MEd
Banning, Kass - MFA, MFA
Eacho, Douglas - PhD
Gagliardi, Francesco - BPhil, MFA, PhD
Georgis, Dina - PhD
Leffler, Elliot - BS, MA, PhD
Lynch, Signy - BA, MA, PhD
McGill, Robert - BA, MPH, MA, PhD
Most, Andrea - BA, MA, PhD
Mullin, Amy - BA, PhD

Nwankwo, Izuu - PhD
Obradovic, Dragana - MA, PhD
Ricco, John - BA, MA, PhD
Ridley, Laticia - BA, MA, PhD
Rokeby, David - DipEd
Salih, Sara - BA, DPhil
Sears, Djanet - MFA
Williams, Katherine - BA, MA, PhD

Drama, Theatre and Performance Studies: Drama, Theatre and Performance Studies MA

The graduate program of the Centre for Drama, Theatre and Performance Studies (CDTPS) is an interdisciplinary program that intersects research in the fields of drama, theatre and performance studies including research in dramatic literature, cross-cultural theory and histories of theatre and performance, conceptual and applied models of dramaturgy and methodologies of practice-based research. Graduating students will be well equipped to pursue doctoral studies, serve as innovative leaders in cultural institutions and the performing arts, or become creative entrepreneurs.

Based on faculty research, we offer support for studies in Canadian theatre; Indigenous and East Asian theatre; dance and physical theatre; popular theatre; cross-cultural communication through performance and media; studies of experimental and avant-garde theatre in North America, Asia, and Europe; early modern theatre and archival studies; queer and feminist performance theory, ethics, and equity in theatre and performance; theatre and globalization; and digital humanities in performance. In addition to courses in the program, students are encouraged to take advantage of cross-listed courses and research opportunities across the humanities, sciences and social sciences. Bilinguality or multilinguality is an asset as well as creative artistic experience and a developed level of digital literacy.

Students entering the **Master of Arts (MA) program** can choose between the Coursework-Only Option and Thesis-Based Option. Applicants interested in the part-time MA option should contact the Associate Director (graduate) to obtain specific information prior to application.

MA Program (Coursework-Only Option)

Minimum Admission Requirements

- Applicants are considered under the General Regulations of the School of Graduate Studies. Admissions are selective; possession of minimum qualifications does not guarantee acceptance. Applicants must also satisfy the Centre for Drama, Theatre and Performance Studies' additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with standing equivalent to at least a University of Toronto B+ and with a significant concentration in theatre, drama, performance, and related disciplines.
- Applications are open through April 15 and admission decisions are made on an ongoing basis. Applicants, in particular international applicants, are encouraged to apply early. Contact the Associate Director for further information.

Completion Requirements

- **Coursework.** Students must successfully complete a minimum of **4.0 full-course equivalents (FCEs)**, as approved by CDTPS, with no individual course grade below B–, as follows:
  - 1.5 FCEs in core courses, including
    - DRA1001H *History and Historiography in Drama, Theatre and Performance Studies*
    - DRA1002H *Graduate Laboratory in Drama, Theatre and Performance Studies*
    - DRA1003H *Introduction to Drama, Theatre and Performance Studies*.
  - 2.5 FCEs in electives.
- The Centre may prescribe certain courses in the individual programs of MA students.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

MA Program (Thesis-Based Option)

Minimum Admission Requirements

- Applicants are considered under the General Regulations of the School of Graduate Studies. Admissions are selective; possession of minimum qualifications does not guarantee acceptance. Applicants must also satisfy the Centre for Drama, Theatre and Performance Studies (CDTPS)'s additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with standing equivalent to at least a University of Toronto B+ and with a significant concentration in theatre, drama, performance, and related disciplines.
- Students who wish to pursue the option to write an MA thesis at CDTPS will be required to submit a statement of research as part of their application package. This statement of research is in addition to the statement of interest required of all applicants to the MA program. This statement of research will be 750 to 1,000 words long and include the research question(s) they wish to pursue, a rationale for their research, their positionality as researcher, a brief discussion of research methods, and a brief review of sources they have encountered that are relevant to their research question(s).

- Applications are open through April 15 and admission decisions are made on an ongoing basis. Applicants, in particular international applicants, are encouraged to apply early. Contact the Associate Director for further information.

Completion Requirements

- Students must complete a minimum of **4.0 full-course equivalents (FCEs)**, as approved by CDTPS, with no individual course grade below B–, as follows:
  - 1.5 FCEs in core courses, including
    - DRA1001H *History and Historiography in Drama, Theatre and Performance Studies*
    - DRA1002H *Graduate Laboratory in Drama, Theatre and Performance Studies*
    - DRA1003H *Introduction to Drama, Theatre and Performance Studies*.
  - 1.5 FCEs in electives.
  - 1.0 FCE: DRA1004Y *MA Thesis* under the supervision of the course instructor.
- CDTPS may prescribe certain courses in the individual programs of MA students.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

Drama, Theatre and Performance Studies: Drama, Theatre and Performance Studies MA (Effective Fall 2025)

The graduate program of the Centre for Drama, Theatre and Performance Studies (CDTPS) is an interdisciplinary program that intersects research in the fields of drama, theatre and performance studies including research in dramatic literature, cross-cultural theory and histories of theatre and performance, conceptual and applied models of dramaturgy, and methodologies of practice-based research. Graduating students will be well equipped to pursue doctoral studies, serve as innovative leaders in cultural institutions and the performing arts, or become creative entrepreneurs.

Based on faculty research, we offer support for studies in Canadian theatre; Indigenous and East Asian theatre; dance and physical theatre; popular theatre; cross-cultural communication through performance and media; studies of experimental and avant-garde theatre in North America, Asia, and Europe; early modern theatre and archival studies; queer and feminist performance theory, ethics, and equity in theatre and performance; theatre and globalization; and digital humanities in performance. In addition to courses in the program, students are encouraged to take advantage of cross-listed courses and research opportunities across the humanities, sciences and social sciences. Bilinguality or multilinguality is an asset as well as creative artistic experience and a developed level of digital literacy.

Students entering the **Master of Arts (MA) program** can choose between three options: the Coursework-Only Option, the Thesis-Based Option, and the Master's Research Project Option.

Applicants interested in the part-time MA option should contact the Associate Director (graduate) to obtain specific information prior to application.

MA Program (Coursework-Only Option)

Minimum Admission Requirements

- Applicants are considered under the General Regulations of the School of Graduate Studies. Admissions are selective; possession of minimum qualifications does not guarantee acceptance. Applicants must also satisfy the Centre for Drama, Theatre and Performance Studies (CDTPS)'s additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with standing equivalent to at least a University of Toronto B+ and with a significant concentration in theatre, drama, performance, and related disciplines.
- Applications are open through April 15 and admission decisions are made on an ongoing basis. Applicants, in particular international applicants, are encouraged to apply early. Contact the Associate Director for further information.

Completion Requirements

- **Coursework.** Students must successfully complete a minimum of **4.0 full-course equivalents (FCEs)**, as approved by CDTPS, with no individual course grade below B–, as follows:
  - 1.5 FCEs in core courses, including
    - DRA1001H *History and Historiography in Drama, Theatre, and Performance Studies*
    - DRA1002H *Graduate Laboratory in Drama, Theatre, and Performance Studies*
    - DRA1003H *Introduction to Drama, Theatre, and Performance Studies*.
  - 2.5 FCEs in electives.
- CDTPS may prescribe certain courses in the individual programs of MA students.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

MA Program (Thesis-Based Option)

Minimum Admission Requirements

- Applicants are considered under the General Regulations of the School of Graduate Studies. Admissions are selective; possession of minimum qualifications does not guarantee acceptance. Applicants must also satisfy the Centre for Drama, Theatre and Performance Studies (CDTPS)'s additional admission requirements stated below.

- An appropriate bachelor's degree from a recognized university with standing equivalent to at least a University of Toronto B+ and with a significant concentration in theatre, drama, performance, and related disciplines.
- Students who wish to pursue the option to write an MA thesis at CDTPS will be required to submit a statement of research as part of their application package. This statement of research is in addition to the statement of interest required of all applicants to the MA program. This statement of research will be 750 to 1,000 words long and include the research question(s) they wish to pursue, a rationale for their research, their positionality as researcher, a brief discussion of research methods, and a brief review of sources they have encountered that are relevant to their research question(s).
- Applications are open through April 15 and admission decisions are made on an ongoing basis. Applicants, in particular international applicants, are encouraged to apply early. Contact the Associate Director for further information.

Completion Requirements

- Students must complete a minimum of **4.0 full-course equivalents (FCEs)**, as approved by CDTPS, with no individual course grade below B–, as follows:
  - 1.5 FCEs in core courses, including
    - DRA1001H *History and Historiography in Drama, Theatre, and Performance Studies*
    - DRA1002H *Graduate Laboratory in Drama, Theatre, and Performance Studies*
    - DRA1003H *Introduction to Drama, Theatre, and Performance Studies*.
  - 1.5 FCEs in electives.
  - 1.0 FCE: DRA1004Y *MA Thesis* under the supervision of the course instructor. Students will produce a written document of 15,000 to 20,000 words, excluding endnotes, appendices, and work cited from original research.
- CDTPS may prescribe certain courses in the individual programs of MA students.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

MA Program (Master's Research Project Option)

Minimum Admission Requirements

- Applicants are considered under the General Regulations of the School of Graduate Studies. Admissions are selective; possession of minimum qualifications does not guarantee acceptance. Applicants must also satisfy the Centre for Drama, Theatre and Performance Studies' additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with standing equivalent to at least a University of Toronto B+ and with a significant concentration in theatre, drama, performance, and related disciplines.
- Applications are open through April 15 and admission decisions are made on an ongoing basis. Applicants, in particular international applicants, are encouraged to apply early. Contact the Associate Director for further information.

Completion Requirements

- Students must complete a minimum of **4.0 full-course equivalents (FCEs)**, as approved by CDTPS, with no individual course grade below B–, as follows:
  - 2.0 FCEs in core courses, including
    - DRA1001H *History and Historiography in Drama, Theatre, and Performance Studies*
    - DRA1002H *Graduate Laboratory in Drama, Theatre, and Performance Studies*
    - DRA1003H *Introduction to Drama, Theatre, and Performance Studies*
    - DRA1005H *Research and Creative Praxis* under the supervision of the course instructor. Students will produce an artistic project in the media of their choice, which will be accompanied by an original written document of 7,000 to 8,000 words, excluding endnotes, appendices, and works cited pages
  - 2.0 FCEs in electives.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

Drama, Theatre and Performance Studies: Drama, Theatre and Performance Studies PhD

The graduate program of the Centre for Drama, Theatre and Performance Studies is an interdisciplinary program that intersects research in the fields of drama, theatre and performance studies including research in dramatic literature, cross-cultural theory and histories of theatre and performance, conceptual and applied models of dramaturgy and methodologies of practice-based research. Graduating students will be well equipped to pursue academic careers, serve as innovative leaders in cultural institutions and the performing arts, or become creative entrepreneurs.

Based on faculty research, support is offered for studies in Canadian theatre; Indigenous and East Asian theatre; dance and physical theatre; popular theatre; cross-cultural communication through performance and media; studies of experimental and avant-garde theatre in North America, Asia, and Europe; early modern theatre and archival studies; queer and feminist performance theory, ethics, and equity in theatre and performance; theatre and globalization; and digital humanities in performance. In addition to courses in the program, students are encouraged to take advantage of cross-listed courses and research opportunities across the humanities, sciences, and social sciences.

Bilinguality or multilinguality is an asset as well as creative artistic experience and a developed level of digital literacy.

Applicants may be accepted into the **Doctor of Philosophy (PhD) program** via one of two routes: 1) following completion of an MA degree or 2) direct entry with a BA degree. The doctoral program is not available as a part-time option. The direct-entry option is a rare exception to the rule; interested applicants interested should contact the Associate Director (graduate) to obtain specific information prior to application.

PhD Program

Minimum Admission Requirements

- Applicants for admission to the Centre for Drama, Theatre and Performance Studies are considered under the General Regulations of the School of Graduate Studies. Admissions are selective; possession of minimum qualifications does not guarantee acceptance. Applicants must also satisfy the Centre's additional admission requirements stated below.
- Applications are open through April 15 and admission decisions are made on an ongoing basis. Applicants, in particular international applicants, are encouraged to apply early. Contact the Associate Director for further information.
- Applicants with a **master of arts degree**: an MA in Drama, Theatre and Performance Studies or the equivalent from a recognized university, must have a standing equivalent to at least a University of Toronto A–. Applicants who have taken the MA through this Centre must be recommended for further study by the instructors whose courses they have taken. Applicants holding the MA of this University in another subject or its equivalent from another university will be considered for admission to the PhD program in light of their previous work and its relation to the Centre's requirements; additional coursework may be required.
- Applicants must arrange two reference letters that address specifically their academic skills and research potential. Admission will be conditional upon satisfactory recommendation.
- Applications must be accompanied by a statement of research intent (up to 5 pages plus bibliography), writing sample (15 pages plus bibliography), and curriculum vitae (CV).

Completion Requirements

- **Coursework**. Students must complete a minimum of **4.0 approved full-course equivalents (FCEs)**, as approved by the Centre, with no individual course grade below B–, including:
  - DRA1011H *Sources and Concepts in Drama, Theatre, and Performance Studies I*
  - DRA1012H *Sources and Concepts in Drama, Theatre, and Performance Studies II*
  - DRA1013H *Modelling New Scholarship in Drama, Theatre, and Performance Studies*
  - DRA1014H *Teaching and Learning in Drama, Theatre, and Performance Studies*
  - DRA5002H *Research Development in Drama, Theatre, and Performance Studies*.
- Demonstrate **reading knowledge of a language** other than English by passing an approved language examination no later than the end of Year 2. Students may also be asked to qualify in other program-related languages.
- Pass the **field examination** at the end of Year 2.
- Pass the **prospectus defence** at the beginning of Year 3.
- Present a **thesis** on an approved topic embodying the results of original investigation which shall be judged to constitute a significant contribution to the knowledge of the field.
- Pass an **oral examination** on the subject of the thesis.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants for admission to the Centre for Drama, Theatre and Performance Studies are considered under the General Regulations of the School of Graduate Studies. Admissions are selective; possession of minimum qualifications does not guarantee acceptance. Applicants must also satisfy the Centre's additional admission requirements stated below.
- Applications are open through April 15 and admission decisions are made on an ongoing basis. Applicants, in particular international applicants, are encouraged to apply early. Contact the Associate Director for further information.
- Applicants with a **bachelor of arts degree**: exceptional students may be admitted to the PhD program (direct entry) from an appropriate BA from a recognized university with a minimum overall average equivalent to a University of Toronto A–. Applicants who do not qualify for direct entry into the PhD will be considered for the MA program.
- Applicants must arrange two reference letters, preferably from undergraduate instructors familiar with the applicant's academic work, that address specifically their academic skills and research potential. Admission will be conditional upon satisfactory recommendation.
- Applications must be accompanied by a statement of research intent (up to 5 pages plus bibliography), writing sample (15 pages plus bibliography), and curriculum vitae (CV).

Completion Requirements

- **Coursework**. Students must complete a minimum of **7.0 full-course equivalents (FCEs)**, as approved by the Centre, with no individual course grade below B–, including:
  - DRA1011H *Sources and Concepts in Drama, Theatre, and Performance Studies I*
  - DRA1012H *Sources and Concepts in Drama, Theatre, and Performance Studies II*
  - DRA1013H *Modelling New Scholarship in Drama, Theatre, and Performance Studies*
  - DRA1014H *Teaching and Learning in Drama, Theatre, and Performance Studies*
  - DRA5002H *Research Development in Drama, Theatre, and Performance Studies*.
- Must maintain an A– average in their first 3.0 FCEs in order to continue in the program.
- Direct-entry students must take MA-level required courses based on consultations with the Director and the Associate Director, Graduate.
- With approval, may elect to transfer to the MA after the first year of study. Work completed in the PhD program will be credited towards the MA.
- Demonstrate **reading knowledge of a language** other than English by passing an approved language examination no later than the end of Year 2. Students may also be asked to qualify in other program-related languages.
- Pass the **field examination** at the end of Year 3.
- Pass the **prospectus defence** at the beginning of Year 4.
- Present a **thesis** on an approved topic embodying the results of original investigation which shall be judged to constitute a significant contribution to the knowledge of the field.
- Pass an **oral examination** on the subject of the thesis.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Drama, Theatre and Performance Studies: Drama, Theatre and Performance Studies MA, PhD Courses

Not all courses listed will be offered every year. Registrants are advised to confirm course offerings by consulting the Centre's website, updated periodically through mid-summer, and by communicating with the Associate Director.

Core Program

Course Code	Course Title
DRA1001H	History and Historiography in Drama, Theatre, and Performance Studies

Course Code	Course Title
DRA1002H	Graduate Laboratory in Drama, Theatre, and Performance Studies
DRA1003H	Introduction to Drama, Theatre, and Performance Studies
DRA1004Y	MA Thesis
DRA1005H	Research and Creative Praxis
DRA1011H	Sources and Concepts in Drama, Theatre, and Performance Studies I
DRA1012H	Sources and Concepts in Drama, Theatre, and Performance Studies II
DRA1013H	Modelling New Scholarship in Drama, Theatre, and Performance Studies
DRA1014H	Teaching and Learning in Drama, Theatre, and Performance Studies
DRA3901H	Topics in Theatre, Drama, and Performance
DRA3902H	Topics in Theatre, Drama, and Performance
DRA3903H	Topics in Theatre, Drama, and Performance
DRA3904H	Topics in Theatre, Drama, and Performance
DRA3905H	Topics in Theatre, Drama, and Performance
DRA3906H	Topics in Theatre, Drama, and Performance
DRA3907H	Topics in Theatre, Drama, and Performance
DRA3908H	Topics in Theatre, Drama, and Performance
DRA4031H	Studies in Canadian Drama and Theatre
DRA4090Y	Directed Reading/Theatre Research
DRA4091H	Directed Reading/Theatre Research
DRA4092H	Directed Reading
DRA4093H	Directed Reading
DRA5002H	Research Development in Drama, Theatre, and Performance Studies (Credit/No Credit)

Cross-Listed Courses

The Centre for Drama, Theatre and Performance Studies also cross-lists courses offered by other graduate units of the University of Toronto. A listing of approved courses, available during the academic year, appears on the Centre's website, which is updated in mid-summer. Students requesting courses from other units may be subjected to quotas and/or wait lists. Language and literature departments do not always provide courses in English translation. Confirm all course information — including date, time, location — with the appropriate unit as well as with the centre's Graduate Administrator.

Earth Sciences

Earth Sciences: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Earth Sciences

MASc, MSc, and PhD

Collaborative Specializations

The following collaborative specialization is available to students in participating degree programs as listed below:

- **Environmental Studies**
  - Earth Sciences, MASc, MSc, PhD

Overview

The Department of Earth Sciences at the University of Toronto has a venerable 165-year tradition of research and education in the geosciences. Rankings place U of T at the very top in the geosciences in Canada and among the very best institutions globally. The Department of Earth Sciences is internationally regarded for research in fundamental geoscience, having given rise to major advances in ore deposits geology, geophysics, Precambrian geology, marine geology, Quaternary geology, and sedimentary basin analysis and more recently, carbon cycling, environmental geochemistry, and paleoecology.

Current education in Earth Sciences at the University of Toronto continues the tradition of excellence. Students have access to a wide range of state-of-the-art laboratories and expert knowledge fostering cutting-edge research in almost all areas of Earth Sciences.

Contact and Address

Web: www.es.utoronto.ca
Email: grad@es.utoronto.ca
Telephone: (416) 978-1240
Fax: (416) 978-3938

Department of Earth Sciences
University of Toronto
Earth Sciences Centre
Room 1066, 22 Ursula Franklin Street
Toronto, Ontario M5S 3B1 Canada

Earth Sciences: Graduate Faculty

Full Members

Anderson, Melissa - BSc, MSc, PhD
Bailey, Richard - BSc, PhD
Bergquist, Bridget - BS, PhD
Bollmann, Jorg - DrRerNat
Chu, Xu - BSc, MPH, PhD
Cowling, Sharon - BSc, MSc, PhD
Desloges, Joseph - BES, MSc, PhD
Diamond, Miriam - MSc, MSc, PhD
Dittrich, Maria - BES, MSc, PhD
Eyles, Nicholas - BSc, MSc, DSc, PhD
Ferris, Grant - BSc, PhD
Finkelstein, Sarah - AB, MPH, PhD ***(Chair and Graduate Chair)***
Gorton, Michael - BSc, BSc, PhD
Gregory, Daniel - BSc, PhD
Halfar, Jochen - PhD
Hamilton, Michael - BSc, PhD
Head, Martin - BSc
Henderson, Grant - PhD
Heron, Philip Joseph - BSc, MSc, PhD
Howard, Ken - BSc, MSc, PhD
Laflamme, Marc - BS, PhD
Liu, Qinya - BSc, PhD
Lui, Semechah - BS, MS, PhD
Miall, Andrew - BSc, PhD
Pysklywec, Russell - BSc, MSc, PhD
Schoenbohm, Lindsay - PhD
Schulze, Daniel - PhD
Sherwood Lollar, Barbara - PhD
Simpson, Myrna - BS, DPhil
Sio, Corliss Kin I. - BS, PhD
Spooner, Edward - BA, PhD
Swidinsky, Andrei - BSc, MSc, PhD ***(Associate Chair, Graduate)***
Tait, Kimberly - BSc, MSc, PhD
Wells, Mathew - BS, DPhil
Wortmann, Ulrich - BSc, MSc, PhD

Members Emeriti

Milkereit, Bernd - DrRerNat
Westgate, John - PhD

Associate Members

Bank, Carl-Georg - MSc, PhD
Jantunen, Liisa - PhD
Kamo, Sandra - BSc, PhD
Williams, Branwen - PhD
Xu, Xiaoyong - BSc, MSc, PhD

Earth Sciences: Earth Sciences MASc

Students perform a two-year, focused research project in a broad range of topics in the earth sciences. Students may also undertake studies in interdisciplinary areas by arrangement with other departments such as Chemistry, Civil Engineering, Ecology and Evolutionary Biology, Materials Science and Engineering, Physics, and the School of the Environment.

Master of Applied Science

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School Graduate Studies. Applicants must also satisfy the Department of Earth Sciences' additional admission requirements stated below.
- A four-year BSc or BASc degree, or its equivalent, from a recognized university.
- High academic standing, equivalent to a B or higher (equivalent to a 3.0 on a 4-point scale) at the University of Toronto, normally demonstrated by the average grade in the final two years.
- The department has no formal foreign language requirements. Students proceeding by thesis to any degree are expected to become familiar with the literature of their subjects, in whatever language it is written.

Completion Requirements

- **Coursework.** Normally, students must successfully complete a total of **2.0 full-course equivalents (FCEs)** as follows:
  - ESS1101H *Graduate Core Course*;
  - 1.5 elective FCEs. Up to 1.0 FCE may be taken outside of the Department of Earth Sciences with approval of the Associate Chair, Graduate Affairs.
- A **research thesis**.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Earth Sciences: Earth Sciences MSc

Students conduct research in a broad range of topics in the earth sciences. Students may also undertake studies in interdisciplinary areas by arrangement with other departments such as Chemistry, Civil Engineering, Ecology and Evolutionary Biology, Materials Science and Engineering, Physics, and the School of the Environment.

There are two streams: a) the Doctoral-Stream (also known as Research-Based) Master's, which involves a one-year research project that culminates in a research report (shorter than a formal thesis) and a presentation; and b) the All-Course Master's Program. The program can be taken on a full-time or part-time basis.

MSc Program (Doctoral-Stream Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Earth Sciences' additional admission requirements stated below.
- A four-year BSc or BASc degree, or its equivalent, from a recognized university.
- High academic standing, equivalent to a B or higher (equivalent to a 3.0 on a 4-point scale) at the University of Toronto, normally demonstrated by the average grade in the final two years.
- The department has no formal foreign language requirements. Students proceeding by thesis to any degree are expected to become familiar with the literature of their subjects, in whatever language it is written.

Completion Requirements

- Students are normally required to complete 3.5 FCEs as follows:
  - ESS1101H *Graduate Core Course*;
  - ESS3603Y *Research Project*;
  - ESS3601Y *Research Presentation*;
  - 1.0 elective FCEs. Up to 0.5 FCE may be taken outside of the Department of Earth Sciences with approval from the Associate Chair, Graduate Affairs.
- To encourage breadth, the department will permit students to substitute electives with equivalent non-earth science courses.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MSc Program (All-Course Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Earth Sciences' additional admission requirements stated below.
- A four-year BSc or BASc degree, or its equivalent, from a recognized university.
- High academic standing, equivalent to a B or higher (equivalent to a 3.0 on a 4-point scale) at the University of Toronto, normally demonstrated by the average grade in the final two years.

- The department has no formal foreign language requirements. Students proceeding by thesis to any degree are expected to become familiar with the literature of their subjects, in whatever language it is written.

Completion Requirements

- Students are normally required to complete 5.0 full-course equivalents (FCEs) as follows:
  - ESS1101H *Graduate Core Course*;
  - ESS3608H *All-Course Research Project*;
  - 4.0 elective FCEs. Up to 3.5 FCEs may be taken outside of the Department of Earth Sciences with approval from the Associate Chair, Graduate Affairs.
- To encourage breadth, the department will permit students to substitute electives with equivalent non-earth science courses.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Earth Sciences: Earth Sciences PhD

PhD students carry out a program of original research and perform a thesis defence. Students may also undertake studies in interdisciplinary areas by arrangement with other departments such as Chemistry, Civil Engineering, Ecology and Evolutionary Biology, Materials Science and Engineering, Physics, and the School of the Environment.

Applicants may enter the PhD program via one of three routes: 1) following completion of an MSc degree; 2) transfer from the University of Toronto MSc program; or 3) direct entry following completion of a bachelor's degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Earth Sciences' additional admission requirements stated below.
- An appropriate, research-oriented MSc degree or its equivalent from a recognized university.
- High academic standing equivalent to a University of Toronto B+ or higher (equivalent to a 3.3 on a 4-point scale) in previous degrees.
- The department has no formal foreign language requirements. Students proceeding by thesis to any degree are expected to become familiar with the literature of their subjects, in whatever language it is written.

Completion Requirements

- Preparation of a **research thesis** constituting a significant contribution to the research area.
- **Coursework.** Students are required to complete **1.5 full-course equivalent (FCEs)** as follows:
  - ESS1101H *Graduate Core Course*;
  - 1.0 elective FCE. Up to 0.5 FCE may be taken outside of the Department of Earth Sciences with approval from the Associate Chair, Graduate Affairs.
- A reduction in the number of required courses may be granted for students who have previously undertaken graduate studies in the appropriate areas. Recommendations must be made by a student's advisory committee for consideration and approval by the department's Graduate Affairs Committee.
- In all cases, the student's supervisory committee reserves the right to assign additional courses if they feel that the student is deficient in a subject area essential to the research.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- A four-year BSc or BASc degree, or its equivalent, from a recognized university. High academic standing during undergraduate study equivalent to an A– or higher (equivalent to a 3.7 on a 4-point scale) at the University of Toronto, normally demonstrated by the average grade in the final two years.
- Students are normally expected to complete the MSc degree before proceeding to the PhD, but exceptions may be made when the student has the appropriate research experience. Normal departmental rules for the completion of the PhD apply (see the departmental website). Students who transfer from the MSc to the PhD will not receive the MSc degree.

Completion Requirements

- Preparation of a **research thesis** constituting a significant contribution to the research area.
- **Coursework.** Students are required to complete a total of **1.5 full-course equivalents (FCEs)** as follows:
  - ESS1101H *Graduate Core Course*;
  - 1.5 elective FCEs. Up to 1.0 FCE may be taken outside of the Department of Earth Sciences with approval from the Associate Chair, Graduate Affairs.
- A reduction in the number of required courses may be granted for students who have previously undertaken graduate studies in the appropriate areas. Recommendations must be made by a student's advisory committee for consideration and approval by the department's Graduate Affairs Committee.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Earth Sciences' additional admission requirements stated below.
- A four-year BSc or BASc degree, or its equivalent, from a recognized university.
- High academic standing equivalent to an A– or higher (equivalent to a 3.7 on a 4-point scale) at the University of Toronto, normally demonstrated by the average grade in the final two years.
- The department has no formal foreign language requirements. Students proceeding by thesis to any degree are expected to become familiar with the literature of their subjects, in whatever language it is written.

Completion Requirements

- Preparation of a **research thesis** constituting a significant contribution to the research area.
- **Coursework.** Students are required to complete a total of **1.5 full-course equivalents (FCEs)** as follows:
  - ESS1101H *Graduate Core Course*;
  - 1.5 elective FCEs. Up to 1.0 FCE may be taken outside of the Department of Earth Sciences with approval from the Associate Chair, Graduate Affairs.
- A reduction in the number of required courses may be granted for students who have previously undertaken graduate studies in the appropriate areas. Recommendations must be made by a student's advisory committee for consideration and approval by the department's Graduate Affairs Committee.
- In all cases, the student's supervisory committee reserves the right to assign additional courses if they feel that the student is deficient in a subject area essential to the research.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Earth Sciences: Earth Sciences PhD

PhD students carry out a program of original research and perform a thesis defence. Students may also undertake studies in interdisciplinary areas by arrangement with other departments such as Chemistry, Civil Engineering, Ecology and Evolutionary Biology, Materials Science and Engineering, Physics, and the School of the Environment.

Applicants may enter the PhD program via one of three routes: 1) following completion of an MSc degree; 2) transfer from the University of Toronto MSc program; or 3) direct entry following completion of a bachelor's degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Earth Sciences' additional admission requirements stated below.
- An appropriate, research-oriented MSc degree or its equivalent from a recognized university.
- High academic standing equivalent to a University of Toronto B+ or higher (equivalent to a 3.3 on a 4-point scale) in previous degrees.
- The department has no formal foreign language requirements. Students proceeding by thesis to any degree are expected to become familiar with the literature of their subjects, in whatever language it is written.

Completion Requirements

- Preparation of a **research thesis** constituting a significant contribution to the research area.
- **Coursework.** Students are required to complete **1.5 full-course equivalent (FCEs)** as follows:
  - ESS1101H *Graduate Core Course*;
  - 1.0 elective FCE. Up to 0.5 FCE may be taken outside of the Department of Earth Sciences with approval from the Associate Chair, Graduate Affairs.
- A reduction in the number of required courses may be granted for students who have previously undertaken graduate studies in the appropriate areas. Recommendations must be made by a student's advisory committee for consideration and approval by the department's Graduate Affairs Committee.
- In all cases, the student's supervisory committee reserves the right to assign additional courses if they feel that the student is deficient in a subject area essential to the research.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- A four-year BSc or BASc degree, or its equivalent, from a recognized university. High academic standing during undergraduate study equivalent to an A– or higher (equivalent to a 3.7 on a 4-point scale) at the University of Toronto, normally demonstrated by the average grade in the final two years.

- Students are normally expected to complete the MSc degree before proceeding to the PhD, but exceptions may be made when the student has the appropriate research experience. Normal departmental rules for the completion of the PhD apply (see the departmental website). Students who transfer from the MSc to the PhD will not receive the MSc degree.

Completion Requirements

- Preparation of a **research thesis** constituting a significant contribution to the research area.
- **Coursework.** Students are required to complete a total of **2.0 full-course equivalents (FCEs)** as follows:
  - ESS1101H *Graduate Core Course*;
  - 1.5 elective FCEs. Up to 1.0 FCE may be taken outside of the Department of Earth Sciences with approval from the Associate Chair, Graduate Affairs.
- A reduction in the number of required courses may be granted for students who have previously undertaken graduate studies in the appropriate areas. Recommendations must be made by a student's advisory committee for consideration and approval by the department's Graduate Affairs Committee.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Earth Sciences' additional admission requirements stated below.
- A four-year BSc or BASc degree, or its equivalent, from a recognized university.
- High academic standing equivalent to an A– or higher (equivalent to a 3.7 on a 4-point scale) at the University of Toronto, normally demonstrated by the average grade in the final two years.
- The department has no formal foreign language requirements. Students proceeding by thesis to any degree are expected to become familiar with the literature of their subjects, in whatever language it is written.

Completion Requirements

- Preparation of a **research thesis** constituting a significant contribution to the research area.
- **Coursework.** Students are required to complete a total of **2.0 full-course equivalents (FCEs)** as follows:
  - ESS1101H *Graduate Core Course*;
  - 1.5 elective FCEs. Up to 1.0 FCE may be taken outside of the Department of Earth Sciences with approval from the Associate Chair, Graduate Affairs.
- A reduction in the number of required courses may be granted for students who have previously undertaken graduate studies in the appropriate areas. Recommendations must be made by a student's advisory committee for consideration and approval by the department's Graduate Affairs Committee.
- In all cases, the student's supervisory committee reserves the right to assign additional courses if they feel that the student is deficient in a subject area essential to the research.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Earth Sciences: Earth Sciences MASc, MSc, PhD Courses

Check with the department for the current year's offerings.

Course Code	Course Title
ESS1101H	Graduate Core Course
ESS1423H	Mineral Deposits
ESS1425H	Advanced Methods in Geosciences
ESS1436H	Paleoecological Assessment of Environmental Change
ESS1441H	Advanced Structure
ESS1445H	Global Tectonics
ESS1461H	Paleoenvironmental Studies
ESS2222H	Tectonics and Planetary Dynamics
ESS2302H	Mineral Resources
ESS2303H	Earth Systems Evolution
ESS2304H	Geochemistry
ESS2608H	Advanced Glacial Sedimentology
ESS2704H	Isotope Geochemistry
ESS3000H	Directed Studies in Earth Sciences
ESS3000Y	Directed Studies in Earth Sciences
ESS3601Y	Research Presentation
ESS3603Y	Research Project
ESS3604H	Selected Topics in Geology
ESS3605H	Selected Topics in Geochemistry
ESS3606H	Selected Topics Earth System Evolution
ESS3607H	Selected Topics in Geodynamics
ESS3608H	All-Course Research Project
JPE1452H	Geophysical Imaging: Non-seismic Methods

Course Code	Course Title
JPE1493H	Seismology
JPE2605H	Advanced Seismology

Additional courses related to geophysics can be found in the SGS Calendar entry for the Department of Physics.

East Asian Studies

East Asian Studies: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

East Asian Studies

MA and PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Book History and Print Culture**
  - East Asian Studies, MA, PhD
- **Contemporary East and Southeast Asian Studies**
  - East Asian Studies, MA
- **Food Studies**
  - East Asian Studies, MA, PhD
- **Sexual Diversity Studies**
  - East Asian Studies, MA, PhD
- **South Asian Studies**
  - East Asian Studies, MA, PhD
- **Women and Gender Studies**
  - East Asian Studies, MA, PhD

Overview

The Department of East Asian Studies has a long, rich history at the University of Toronto as a centre for research and teaching on the humanities of East Asia, past and present. Faculty members specialize in social and cultural history, literature, philosophy, religion, language, art, film and visual culture. They are committed to the innovative pursuit of knowledge across regional, temporal and disciplinary divides. Many hold joint appointments with various departments, centres and collaborative specializations throughout the university.

Students and faculty in the department have access to a wide array of resources to support their research and learning. The Cheng Yu Tung East Asian Library holds more than 500,000 volumes in East Asian languages, making it a leading research collection in North America. The Royal Ontario Museum houses six separate galleries on the arts and artifacts of East Asia. The department and the Asian Institute host a variety of lecture series and workshops. The university campus is located in downtown Toronto, home to multiple thriving Asian communities.

Contact and Address

Web: www.eas.utoronto.ca
Email: eas.grad@utoronto.ca
Telephone: (416) 946-3625
Fax: (416) 978-5711

Department of East Asian Studies
University of Toronto
Robarts Library 14-080, 130 St. George Street
Toronto, Ontario M5S 3H1 Canada

East Asian Studies: Graduate Faculty

Full Members

Cazdyn, Eric - BA, MA, PhD
Feng, Linda Rui - BA, MA, PhD ***(Acting Chair and Acting Graduate Chair)***
Kawashima, Ken - BA, MA, PhD
Keirstead, Thomas - BA, MA, PhD
Lam, Tong - BSc, MA, PhD
Meng, Yue - BA, MA, MA, PhD
Poole, Janet - BA, MA, PhD ***(Chair and Graduate Chair)***
Sakaki, Atsuko - BA, MA, PhD
Sanders, Graham - BA, PhD
Schmid, André - BA, MA, PhD
Wu, Yiching - BA, MA, MA, PhD
Yoneyama, Lisa - BA, MA, PhD
Zhong, Yurou - BA, MA, PhD ***(Graduate Coordinator)***

Members Emeriti

Arntzen, Sonja - BA, MA, PhD
Donnelly, Michael - BSc, MA, PhD
Falkenheim, Victor - AB, MA, PhD
Liman, Anthony - MA
Liu, Johanna - BA, MA, PhD
Lynn, Richard - BA, MA, PhD
Nakajima, Kazuko - BA, MA, MPH
Schlepp, Wayne - BSc, BA, PhD
Tsukimura, Reiko - BA, MA, PhD

Associate Members

Arimori, Jotaro - BA, AB, MA
Chen, Li - BA, MA, AM, JD, PhD
Chin, Carol - BA, MA, PhD
Cho, Michelle - BA, MA, DPhil
Crawford, Gary - BSc, MA, PhD
Diaz, Robert - PhD
Fujitani, Takashi - BA, MA, PhD
Grewal, Anup - BA, MA, PhD
Gu, Yi - BLitt, MMSt, PhD
Hsiung, Ping-Chun - PhD
Huang, Erin Yu-Tien - BA, MPH, PhD
Ko, Kyoungrok - BA, MA, MSc
Komuro-Lee, Ikuko - BA, MA
Luong, Hy Van - BA, PhD
Peng, Ito - BSW, BSc, MA, PhD

Purtle, Jennifer - BA, MPH, MA, PhD
Rupprecht, Hsiao-Wei - BA, MA, MLS, PhD
Satsuka, Shiho - BA, BA, MA, PhD
Shen, Chen - BA, PhD
Song, Zijiang - BA, MA, PhD
Tran, Nhung - MA, PhD
Vedal, Nathan - BMus, MA, PhD
Wang, Yvon - BA, PhD
Wong, Joseph - BA, MA, PhD, CRC

East Asian Studies: East Asian Studies MA

East Asian Studies offers three tracks through its **Master of Arts (MA) program**: 1) MA through coursework, 2) MA with Major Research Paper (MRP), and 3) MA with thesis. It is possible to switch between the three tracks as long as all requirements are fulfilled.

Applicants should consult the department's website for details on the MA program, applications, course offerings, and profiles of the graduate faculty.

MA Program: Coursework Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of East Asian Studies' additional admission requirements stated below.
- Successful completion of an appropriate bachelor's degree from a recognized university with a major in East Asian studies and at least a B+ standing in the final year.
- Applicants without a major in East Asian studies may also be considered, provided they demonstrate sufficient scholarly interest and academic preparation in East Asian studies.
- Statement of approximately 500 words (two pages) setting out the student's main fields of interest and proposed course of study.
- Two letters of recommendation from scholars who have knowledge of previous academic work.
- Programs are based on the study of original texts. This presupposes knowledge of the relevant languages.
- A 10- to 15-page sample of the applicant's academic writing in English.
- Applicants educated outside Canada whose primary language is not English, and who graduated from a university where the language of instruction and examination was not English, must provide results of an English-language proficiency examination as part of their application. Tests must have been taken within the last 24 months at the time of submission of their application. Applicants taking the Internet-based Test of English as a Foreign Language (TOEFL) must achieve a minimum score of 100/120 and 22/30 on the writing and speaking sections. Comparable scores on similar tests are also acceptable.

Completion Requirements

- **Coursework:** students normally complete 4.0 full-course equivalents (FCEs) with at least 2.0 FCEs in EAS courses, including the required course EAS2020H *Critical Approaches to East Asia*.
- Courses are selected in consultation with the Graduate Associate Chair.
- Students are encouraged to continue with necessary language study, but language courses are not included in the FCEs.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

MA Program: Major Research Paper Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of East Asian Studies' additional admission requirements stated below.
- Successful completion of an appropriate bachelor's degree from a recognized university with a major in East Asian studies and at least a B+ standing in the final year.
- Applicants without a major in East Asian studies may also be considered, provided they demonstrate sufficient scholarly interest and academic preparation in East Asian studies.
- Statement of approximately 500 words (two pages) setting out the student's main fields of interest and proposed course of study.
- Two letters of recommendation from scholars who have knowledge of previous academic work.
- Programs are based on the study of original texts. This presupposes knowledge of the relevant languages.
- A 10- to 15-page sample of the applicant's academic writing in English.
- Applicants educated outside Canada whose primary language is not English, and who graduated from a university where the language of instruction and examination was not English, must provide results of an English-language proficiency examination as part of their application. Tests must have been taken within the last 24 months at the time of submission of their application. Applicants taking the Internet-based Test of English as a Foreign Language (TOEFL) must achieve a minimum score of 100/120 and 22/30 on the writing and speaking sections. Comparable scores on similar tests are also acceptable.

Completion Requirements

- **Coursework plus Major Research Paper (MRP):** the MRP must be written with the guidance of a supervisor after the completion of coursework. Normally 4.0 FCEs as follows:

    - 3.0 FCEs of coursework including at least 1.5 FCEs in EAS courses, including the required course EAS2020H *Critical Approaches to East Asia.*
    - EAS1150Y *Major Research Paper*.
- Courses are selected in consultation with the Graduate Associate Chair.
- Students are encouraged to continue with necessary language study, but language courses are not included in the FCEs.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

MA Program: Thesis Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of East Asian Studies' additional admission requirements stated below.
- Successful completion of an appropriate bachelor's degree from a recognized university with a major in East Asian studies and at least a B+ standing in the final year.
- Applicants without a major in East Asian studies may also be considered, provided they demonstrate sufficient scholarly interest and academic preparation in East Asian studies.
- Statement of approximately 500 words (two pages) setting out the student's main fields of interest and proposed course of study.
- Two letters of recommendation from scholars who have knowledge of previous academic work.
- Programs are based on the study of original texts. This presupposes knowledge of the relevant languages.
- A 10- to 15-page sample of the applicant's academic writing in English.
- Applicants educated outside Canada whose primary language is not English, and who graduated from a university where the language of instruction and examination was not English, must provide results of an English-language proficiency examination as part of their application. Tests must have been taken within the last 24 months at the time of submission of their application. Applicants taking the Internet-based Test of English as a Foreign Language (TOEFL) must achieve a minimum score of 100/120 and 22/30 on the writing and speaking sections. Comparable scores on similar tests are also acceptable.

Completion Requirements

- **Coursework plus thesis:** the thesis must be written with the guidance of a supervisor after the completion of coursework. Normally 4.0 FCEs as follows:
    - 3.0 FCEs of coursework including at least 1.5 FCEs in EAS courses, including the required course EAS2020H *Critical Approaches to East Asia.*
    - EAS1250Y *MA Thesis*.
- Courses are selected in consultation with the Graduate Associate Chair.
- Students are encouraged to continue with necessary language study, but language courses are not included in the FCEs.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

East Asian Studies: East Asian Studies PhD

The **Doctor of Philosophy (PhD) program** is a research degree that prepares students to teach and research in the area of East Asian Studies. The program consists of course work, language study, comprehensive exams, a dissertation prospectus, writing of a dissertation, and a final oral examination on the dissertation.

Applicants should consult the department's website for details on the PhD program, applications, course offerings, and profiles of the graduate faculty.

Applicants may enter the PhD program via one of two routes: 1) following completion of an appropriate MA degree or 2) direct entry after completing a BA degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of East Asian Studies' additional admission requirements stated below.
- Normally, completion of the MA program in the Department of East Asian Studies, or its equivalent from a recognized university, with an average grade of at least A–.
- Statement of approximately 500 words (two pages) setting out the student's main fields of interest and proposed course of study.
- Three letters of recommendation from scholars who have knowledge of previous academic work.
- Programs are based on the study of original texts. This presupposes knowledge of the relevant languages.
- A 10- to 15-page sample of the applicant's academic writing in English.
- Applicants educated outside Canada whose primary language is not English, and who graduated from a university where the language of instruction and examination was not English, must provide results of an English-language proficiency examination as part of their application. Tests must have been taken within the last 24 months at the time of submission of their application.

Applicants taking the Internet-based Test of English as a Foreign Language (TOEFL) must achieve a minimum score of 100/120 and 22/30 on the writing and speaking sections. Comparable scores on similar tests are also acceptable.

Completion Requirements

- **Coursework**. Students must successfully complete a total of **4.0 non-language full-course equivalents (FCEs)**, including at least 2.0 FCEs in EAS courses, to be selected in consultation with the Graduate Associate Chair. 2.0 FCEs must be completed in Year 1, with an average grade of at least A–. The remaining courses are normally completed by the end of Year 2, maintaining an average of at least A–.
  - EAS2020H *Critical Approaches to East Asia* is a required course if not taken previously. If EAS2020H has previously been taken, students are required to take an additional 0.5 FCE.
  - Students are permitted to take some of their courses in other departments.
- A **comprehensive qualifying examination**, undertaken with the guidance of a supervisory committee, must be taken by November 30 of Year 3. The committee will provide the student with three questions (in a Major, Minor, and Adjacent field), for which the student must provide written answers within seven days. Within one week after submitting the answers, the student will meet with the committee to provide an oral defence of the answers. The committee will decide whether the student has passed or failed in each of the three fields on the basis of the written answers and oral defence taken together. If the student fails the Major field, he or she will be given one more chance to pass an entirely new examination, within three months of the first attempt. If the student passes the Major field but fails either one or both of the Minor and Adjacent fields, then he or she will be given one more chance to take an examination consisting of new questions in the fields failed, within six weeks of the first attempt. Third attempts are not permitted.
- An appropriate level of proficiency in at least one **language** (other than English) relevant to the student's areas of study must be demonstrated by November 30 of Year 3; the language(s), level of proficiency, and method of evaluation are to be determined by the Graduate Associate Chair, in consultation with the student's supervisor. Students will take a language placement test (or multiple tests, depending on the area of study) at the beginning of their program. Upon receiving the placement result, students must meet with their supervisor. If the appropriate level of proficiency has not been demonstrated, the student and their supervisor will devise a plan for achieving proficiency by November 30 of Year 3. The plan will be approved by the Graduate Associate Chair.
- Within one to three months after completing the comprehensive examination, students are required to produce a **dissertation prospectus** to be approved by their supervisory committee. The committee will meet to consider the dissertation prospectus and provide the student with feedback. The student will make the revisions and submit the prospectus to his/her supervisor for final approval, which must be given by the end of the student's third year. After the dissertation prospectus is approved, the student advances to candidacy.
- After completing all of the above requirements, students are required to produce a **doctoral dissertation** with the guidance of their supervisory committee. The completed dissertation must be defended at a Doctoral Final Oral Examination.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of East Asian Studies' additional admission requirements stated below.
- Admission to the PhD program normally requires completion of the MA program in the Department of East Asian Studies, or its equivalent from a recognized university, with an average grade of at least A–. However, departmental assessment may also permit registration directly from a BA degree in the most exceptional cases where, for instance, there is a very high grade point average or a well-documented demonstration of capacity for original research.
- Statement of approximately 500 words (two pages) setting out the student's main fields of interest and proposed course of study.
- Three letters of recommendation from scholars who have knowledge of previous academic work.
- Programs are based on the study of original texts. This presupposes knowledge of the relevant languages.
- A 10- to 15-page sample of the applicant's academic writing in English.
- Applicants educated outside Canada whose primary language is not English, and who graduated from a university where the language of instruction and examination was not English, must provide results of an English-language proficiency examination as part of their application. Tests must have been taken within the last 24 months at the time of submission of their application. Applicants taking the Internet-based Test of English as a Foreign Language (TOEFL) must achieve a minimum score of 100/120 and 22/30 on the writing and speaking sections. Comparable scores on similar tests are also acceptable.

Completion Requirements

- **Coursework**. Students must successfully complete a total of **4.0 non-language full-course equivalents (FCEs)**, including at least 2.0 FCEs in EAS courses, to be selected in consultation with the Graduate Associate Chair. 2.0 FCEs must be completed in Year 1, with an average grade of at least A–. The remaining courses are normally completed by the end of Year 2, maintaining an average of at least A–.

    - EAS2020H *Critical Approaches to East Asia* is a required course if not taken previously. If EAS2020H has previously been taken, students are required to take an additional 0.5 FCE.
    - Students are permitted to take some of their courses in other departments.
- EAS1150Y *Reading and Major Research Paper*, to be written with the guidance of and assessed by the student's academic supervisor, must be completed by August 31 of Year 2.
- A **comprehensive qualifying examination**, undertaken with the guidance of a supervisory committee, must be taken by February 28 of Year 3. The committee will provide the student with three questions (in a Major, Minor, and Adjacent field), for which the student must provide written answers within seven days. Within one week after submitting the answers, the student will meet with the committee to provide an oral defence of the answers. The committee will decide whether the student has passed or failed in each of the three fields on the basis of the written answers and oral defence taken together. If the student fails the Major field, he or she will be given one more chance to pass an entirely new examination, within three months of the first attempt. If the student passes the Major field but fails either one or both of the Minor and Adjacent fields, then he or she will be given one more chance to take an examination consisting of new questions in the fields failed, within six weeks of the first attempt. Third attempts are not permitted.
- An appropriate level of proficiency in at least one **language** (other than English) relevant to the student's areas of study must be demonstrated by November 30 of Year 3; the language(s), level of proficiency, and method of evaluation are to be determined by the Graduate Associate Chair, in consultation with the student's supervisor. Students will take a language placement test (or multiple tests, depending on the area of study) at the beginning of their program. Upon receiving the placement result, students must meet with their supervisor. If the appropriate level of proficiency has not been demonstrated, the student and their supervisor will devise a plan for achieving proficiency by November 30 of Year 3. The plan will be approved by the Graduate Associate Chair.
- Within one to three months after completing the comprehensive examination, students are required to produce a **dissertation prospectus** to be approved by their supervisory committee. The committee will meet to consider the dissertation prospectus and provide the student with feedback. The student will make the revisions and submit the prospectus to his/her supervisor for final approval, which must be given by the end of the student's third year. After the dissertation prospectus is approved, the student advances to candidacy.
- After completing all of the above requirements, students are required to produce a **doctoral dissertation** with the guidance of their supervisory committee. The completed dissertation must be defended at a Doctoral Final Oral Examination.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

East Asian Studies: East Asian Studies MA, PhD Courses

The following courses may be offered by the department. Not all courses are offered every year. Please consult the department's website for a current course listing.

Cultural Studies

Course Code	Course Title
EAS1101Y	Classical Chinese I
EAS1102H	Classical Chinese II
EAS1177H	Chinese Cultural and Historical Studies
EAS1180H	Environmental Criticism
EAS1335H	Violence, Justice, the Human
EAS1336H	Memory and Trauma in Critical East Asian Historical Perspective
EAS1337H	Diaspora and Transpacific Studies
EAS1338H	Asian Feminist Epistemologies: Theory and Embodiment
EAS1339H	Topics in Chinese Art Theories
EAS1419H	Chinese Cultural Studies Seminar: May Fourth
EAS1430H	Hong Kong Cinema and Adaptation
EAS1431H	Advanced Seminar in Japanese Cinema
EAS1432H	Korean Cultural Studies Seminar
EAS1436H	Rethinking Realism in 20th Century Korea
EAS1439H	Crisis, Population, Archive
EAS1445H	On the Organic: Land and Labour Power
EAS1447H	Sound Studies and Modern Japan
EAS1449H	Future, Architecture, Japan
EAS1475H	Contemporary Cultural Theories
EAS1477H	Samurai Culture
EAS1530H	Sound Matters
EAS1531H	Ocean Media: Islanding, Space, Modernity
EAS2020H	Critical Approaches to East Asia
EAS2323H	Rethinking Chinese Cultural History

History

Course Code	Course Title
EAS1130H	Rethinking China's Cultural Revolution: History, Politics, and Theory
EAS1140Y	From Republic to People's Republic: The Chinese Revolution from 1895 to the Present
EAS1173H	Modern Korean History Seminar
EAS1173Y	Modern Korean History Seminar
EAS1174Y	Rethinking Empire in East Asia
EAS1176H	Comparative Historical Socialisms in East Asia and Beyond
EAS1411H	Art and Archaeology of Early China
EAS1412H	Special Topics in Archaeology of Ancient China
EAS1425H	Critique of Everyday Life and Capitalism
EAS1426H	Transition, Subjectivity, Revolution
EAS1427H	The Production of Difference and the Logic of Capital
EAS1446H	The Communist Hypothesis and Asia
EAS1471H	Issues in Political Economy of South Korea
EAS1472H	Cold War in the Pacific
EAS1496H	History of the Chinese Book
EAS1543H	Empire, Ethnicity, and Translation in Inner Asian and Chinese History

Language

Course Code	Course Title
EAS1115Y	Reading Japanese for Graduate Purposes
EAS1301Y	Modern Standard Japanese I
EAS1302Y	Modern Standard Japanese II
EAS1303Y	Modern Standard Japanese III
EAS1304H	Modern Standard Japanese IVa
EAS1305H	Modern Standard Japanese IVb
EAS1321H	Japanese I for Students with Prior Background
EAS1322H	Modern Standard Japanese II Prior Background
EAS1621Y	Modern Standard Korean I
EAS1622Y	Modern Standard Korean II
EAS1623Y	Modern Standard Korean III
EAS1631Y	Accelerated Modern Standard Korean I and II
EAS1632H	Accelerated Modern Standard Korean II
EAS1801Y	Modern Standard Chinese I
EAS1802Y	Modern Standard Chinese II
EAS1803Y	Modern Standard Chinese III
EAS1811Y	Modern Standard Chinese I for Students With Background in Chinese
EAS1814H	Modern Standard Chinese IVa
EAS1815H	Modern Standard Chinese IVb

Literature

Course Code	Course Title
EAS1137H	Chinese Poetics
EAS1137Y	Chinese Poetics
EAS1151H	Chinese Poetry I
EAS1152H	Chinese Poetry II
EAS1182H	Writing as Technology in Modern China
EAS1408H	Identity and Diaspora in Modern Taiwanese Literature
EAS1417H	Korean Literary Translation
EAS1437H	Mid-century Modernism in the Koreas: Literature, War, and Decolonization
EAS1444H	The City, Body, and Text in Modern Japanese Literature
EAS1468H	Mahayana Sutra Literature
EAS1538H	Writing Women in Premodern China
EAS1541H	A Comparative History of Reading in East Asia and Beyond
EAS1542H	Manchu Language and History
EAS1550H	Hong Kong Literature
COL5101H	Diasporic Cities: Itinerant Narratives of Metropoles by Travellers and Expatriates
JLA5082H	The Rhetoric of Photography

Philosophy and Religion

Course Code	Course Title
EAS1407H	Textual Analysis of Classical Chinese Philosophy

Research Seminars

Course Code	Course Title
EAS1100H	Special Topics in Chinese Studies
EAS1100Y	Special Topics in Chinese Studies
EAS1116H	Special Topics in Chinese Culture
EAS1116Y	Special Topics in Chinese Culture
EAS1143H	Topics in Medieval China
EAS1150H	Reading and Major Research Paper
EAS1150Y	Reading and Major Research Paper
EAS1163H	Special Topics in Korean Studies
EAS1250Y	MA Thesis
EAS1300H	Special Topics in Japanese Studies
EAS1313Y	Japanese Source Materials and Reference Works
EAS1323Y	Readings in Japanese Documentary Source Materials
EAS1497H	Special Topics in East Asian Studies
EAS1999Y	East Asian Studies Bibliography, Reference, and Research Methodology

Ecology and Evolutionary Biology

Ecology and Evolutionary Biology: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Ecology and Evolutionary Biology

MSc and PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Environmental Studies**
  - Ecology and Evolutionary Biology, PhD
- **Genome Biology and Bioinformatics**
  - Ecology and Evolutionary Biology, PhD

Overview

We in the Department of Ecology and Evolutionary Biology (EEB) are a curious, inspired, and welcoming community of world-class scholars and advocates. We research, teach, and consult on all aspects of earth's organismal diversity, from genomes to ecosystems, and all plant, animal, and microbial species. Individual and collaborative research by members of the EEB department covers the range of the complementary disciplines of ecology and evolutionary biology, employing all technical approaches ranging across field work, lab work, molecular biology, bioinformatics, eco-informatics, computer simulation, statistics, and mathematical theory. Our research often involves study and synthesis across multiple levels of biological organization. Faculty research interests include population/community ecology, ecosystem/landscape ecology, evolutionary ecology, conservation biology, genetics, evolutionary genetics, genomics, molecular evolution, bioinformatics, behaviour, behaviour genetics, theoretical biology, plant biology, animal biology, taxonomy/systematics, developmental biology, anatomy, and physiology.

The main goal of our graduate programs is to train thoughtful, versatile scientists who (i) perform innovative, publication-quality research, (ii) think critically, (iii) have mastered skills specific to their fields, (iv) excel at conveying their ideas and results in both written and spoken formats, and (v) go on to productive careers in their areas of interest and expertise. We are training the next generation of scientists who will face pressing societal issues that must be solved by highly trained ecologists and evolutionary biologists. Graduate students are engaged in all aspects of research and departmental community. Community activities include reading and discussion groups, seminars, and social events. Other activities include workshops on writing papers, giving presentations, R and Python, and finding jobs — both academic and those outside of universities.

The EEB graduate program is home to over 60 faculty members specializing in ecology and evolution. Professors supervising graduate students are located on all three campuses of the University (St. George, Mississauga, Scarborough) as well as at the Royal Ontario Museum (ROM). The EEB department enjoys strong links with the Data Science Institute, the Centre for Global Change, the School of Cities, the School of the Environment, and the ROM. The Koffler Scientific Reserve, a nearby field station owned by the University, is dedicated to ecological and evolutionary research. The department also has partnerships with government agencies including the Ontario Ministry of Natural Resources and Forestry that helps provide access to infrastructure, including field and lab facilities in Algonquin Provincial Park, funding, and long-term data sets.

Contact and Address

Web: www.eeb.utoronto.ca
Email: gradadmin.eeb@utoronto.ca
Telephone: (416) 978-7172
Fax: (416) 978-5878

Department of Ecology and Evolutionary Biology
University of Toronto, Earth Sciences Centre
Room 3046, 25 Willcocks Street
Toronto, Ontario M5S 3B2 Canada

Ecology and Evolutionary Biology: Graduate Faculty

Full Members

Agrawal, Aneil - BSc, PhD, CRC
Andrade, Maydianne - BSc, MS, PhD
Anreiter, Ina - BSc, MSc, PhD
Baines, Celina - BSc, MSc, PhD
Bell, Terrence - BSc, MSc, PhD
Bontrager, Megan - BSc, BSc, PhD, PhD
Cadotte, Marc - BS, MS, PhD
Caron, Jean-Bernard - MSc, PhD
Chang, Belinda - AB, PhD, CRC
Claramunt Tammaro, Santiago - BSc, PhD
Currie, Douglas - BSc, PhD
Cutter, Asher - PhD, CRC ***(Associate Chair, Graduate Studies)***
Cyr, Helene - BSc, MSc, PhD
D'Aloia, Cassidy Constance - BA, PhD
Darling, D. Christopher - MSc, PhD
Dillon, Marcus - BA, PhD
Engstrom, Mark - BSc, MSc, PhD
Ensminger, Ingo - PhD

Evans, David - BSc, PhD
Fitzpatrick, Mark - BS, MS, PhD
Fortin, Marie-Josée - MSc, PhD, CRC
Frederickson, Megan - AB, PhD
Gilbert, Benjamin - BSc, MSc, PhD
Guttman, David - BS, PhD
Holmes, Melissa - BA, MA, PhD
Jackson, Donald - BSc, MSc, PhD
Johnson, Marc - BSc, PhD
Kotanen, Peter - BSc, MSc, PhD
Krkosek, Marty - BSc, PhD, CRC
Levine, Joel - BA, PhD ***(Chair and Graduate Chair)***
Lovejoy, Nathan Richard - BSc, MS, PhD
Lujan, Nathan Keller - BSc, PhD
MacIvor, Scott - BSc, MSc, PhD
Mahler, Luke - BA, PhD
Mandrak, Nicholas - BSc, MSc, PhD
Mason, Andrew - MS, PhD
McCauley, Shannon - PhD
McMeans, Bailey - BSc, MSc, PhD
Mideo, Nicole - BSc, PhD
Molnar, Peter Kalman - BS, MMath, PhD
Moncalvo, Jean-Marc - PhD
Murphy, Robert - BSc, MA, PhD
Murray, Rosalind - BSc, MSc, PhD
Osmond, Matthew - BSc, MSc, PhD
Parins-Fukuchi, Tomomi - AB, PhD
Rajavasireddy, Satyaki - BCh, BCh, MC, MC, PhD
Ratcliffe, John - BSc, MSc, PhD
Reisz, Robert - BSc, MSc, PhD, FRSC
Rochman, Chelsea - BS, PhD
Rodd, Helen - MSc, PhD
Rollinson, Njal - BSc, MSc, PhD
Rowe, Locke - BSc, MSc, PhD, CRC
Sage, Rowan - PhD
Sage, Tammy - BA, MS, PhD
Short, Steven - BSc, PhD
Sokolowski, Marla - BSc, PhD, CRC
Stefanovic, Sasa - MSc, PhD
Stinchcombe, John - BA, PhD
Sztepanacz, Jacqueline - BSc, MSc, PhD
Wagner, Helene - MSc, MSc, PhD
Wang, Yan - BSc, MSc, PhD
Weir, Jason Tyler - AB, PhD
Weis, Arthur - BPhil, PhD
Welch Jr., Ken - BS, MA, PhD
Wright, Stephen - BSc, MS, PhD, CRC

Members Emeriti

Barrett, Spencer - BSc, PhD
Boonstra, Rudy - BSc, PhD
Collins, Nicholas C. - BA, PhD
Dengler, Nancy - BA, MS, PhD
Eckenwalder, James - BA, PhD
Fulthorpe, Roberta - BSc, MSc, PhD
Gross, Mart - BSc, PhD
Gwynne, Darryl - BSc, PhD
Harvey, Harold - MSc, PhD
Kohn, Linda - BS, PhD
McLennan, Deborah - BSc, PhD
Morris, Glenn - BSA, MS, PhD
Sprules, Gary - BSc, MA, PhD
Thompson, Paul - BA, MA, PhD
Thomson, James - MS, PhD

Associate Members

Chu, Cindy - BSc, MSc, PhD
De Kerckhove, Derrick - BSc, MSc, PhD
James, Patrick - PhD
Lauzon, Ryan - BSc
Minns, Charles - BSc, PhD
Ridgway, Mark - MSc, PhD
Shuter, Brian - BSc, MSc, PhD
Somers, Keith - MSc, PhD

Ecology and Evolutionary Biology: Ecology and Evolutionary Biology MSc

The main goal of the MSc program is to provide students with the opportunity to design, conduct, and write up a substantial independent research project. Students' projects cover the full range of topics listed in the Overview (above) and may include field work, lab work, molecular biology, bioinformatics, eco-informatics, computer simulations, statistics, and/or mathematical theory. MSc students must demonstrate competence in independent research and will conduct research with the goal of authoring or co-authoring a scientific publication. MSc graduates from our program go on to a wide range of careers including jobs in government agencies, data science, teaching, consulting, and higher education.

Master of Science

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Ecology and Evolutionary Biology's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university, with an average grade equivalent to a University of Toronto B+ or better in the last year of the bachelor's degree and a minimum B average in the previous year.
- Applicants will not be admitted until they have secured an agreement with a graduate faculty member to sponsor and supervise the student's research.

Completion Requirements

- **Coursework.** Students must successfully complete **0.5 graduate full-course equivalent (FCE)** chosen from courses offered by the EEB department or, with the permission of the supervisor(s) and supervisory committee, offered by other U of T departments. Students should consult supervisory faculty about the most appropriate courses.
- Students must complete a **thesis** under the direction of the student's supervisor, assisted by an advisory committee, and defended at an oral examination.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F)
Time Limit: 3 years full-time

Ecology and Evolutionary Biology: Ecology and Evolutionary Biology PhD

The main goal of the PhD program is to provide students with the opportunity to design, conduct, and write about a collection of substantial, inter-related, independent research projects. Students' projects cover the full range of topics listed in the Overview (above) and may include field work, lab work, molecular biology, bioinformatics, eco-informatics, statistics, mathematical theory, computer simulations, or some combination of these approaches.

- PhD students are expected to complete an original independent research program that makes substantial and innovative contributions to their field of research. It is expected that PhD candidates will publish multiple primary scientific articles based on their research.
- A thesis is completed under the direction of the student's supervisor(s), assisted by a supervisory (advisory) committee, and defended at an oral examination.

Applicants may enter the PhD program via one of three routes: 1) following completion of a recognized MSc degree in ecology and evolutionary biology; 2) transfer from the University of Toronto's EEB MSc program; or 3) direct entry, typically following completion of a BSc degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Ecology and Evolutionary Biology's additional admission requirements stated below.
- Applicants will not be admitted until they have secured an agreement with a graduate faculty member to sponsor and supervise the student's research and the applicant has been offered a graduate position by EEB.
- Applicants may be accepted who already hold an MSc degree from a recognized university with a grade average equivalent to at least a University of Toronto A– during the MSc and an average of at least B+ in the last year of the bachelor's program.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **1.5 graduate full-course equivalents (FCEs)** (three half courses). These courses are chosen from those offered by the EEB department, or with the permission of the supervisor(s) and supervisory committee, offered by other U of T departments.
- During an **appraisal exam**, students are examined on both their mastery of concepts in ecology and evolutionary biology and a submitted research proposal. Students are examined 14 to 20 months into the program.
- Students must deliver **two public seminars** in the department based on their thesis research.
- Students must submit a **thesis** and defend it at a **Doctoral Final Oral Examination** conducted by the School of Graduate Studies.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- Applicants may be accepted first into EEB's MSc program from a bachelor's program and, conditional upon evidence of research excellence as judged by the thesis supervisory committee and an interview, may transfer into the PhD program.
- Students must make arrangements to secure a research supervisor by contacting professors in the department.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **2.0 graduate full-course equivalents (FCEs)** (four half courses). These courses are chosen from those offered by the EEB department or, with the permission of the supervisor(s) and supervisory committee, offered by other U of T departments.
- Students transferring into the PhD program from the MSc may apply 0.5 graduate FCE towards the PhD course requirement.
- During an **appraisal exam**, students are examined on both their mastery of concepts in ecology and evolutionary biology and a submitted research proposal. Students are examined 14 to 26 months into the program.
- Students must deliver **two public seminars** in the department based on their thesis research.
- Students must submit a **thesis** and defend it at a **Doctoral Final Oral Examination** conducted by the School of Graduate Studies.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Ecology and Evolutionary Biology's additional admission requirements stated below.
- Applicants will not be admitted until they have secured an agreement with a graduate faculty member to sponsor and supervise the student's research and the applicant has been offered a graduate position by EEB.
- Exceptional applicants may be accepted for direct entry into the PhD with a BSc degree with an average grade equivalent to a University of Toronto A– or better in courses in ecology and evolutionary biology, and evidence of research potential.

Completion Requirements

- **Coursework.** Exceptional students admitted to the PhD program without an MSc degree must successfully complete a total of **2.0 graduate full-course equivalents (FCEs)** (four half courses). These courses are chosen from those offered by the EEB department, or with the permission of the supervisor(s) and supervisory committee, offered by other U of T departments.
- During an **appraisal exam**, students are examined on both their mastery of concepts in ecology and evolutionary biology and a submitted research proposal. Students are examined 14 to 26 months into the program.
- Students must deliver **two public seminars** in the department based on their thesis research.
- Students must submit a **thesis** and defend it at a **Doctoral Final Oral Examination** conducted by the School of Graduate Studies.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Ecology and Evolutionary Biology: Ecology and Evolutionary Biology MSc, PhD Courses

Not all courses are offered every year. Please visit the Ecology and Evolutionary Biology website for a current list of course offerings including special topics courses.

Courses Offered at the Graduate Level Only

Course Code	Course Title
EEB1210H	Advanced Statistics
EEB1230H	Multivariate Statistics
EEB1250H	Spatial Statistics
EEB1310H	Philosophy and Methods
EEB1315H	Professional Skills Development in EEB
EEB1320H	Ecology
EEB1350H	Evolution
EEB1420H	Special Topics in Ecology
EEB1423H	Special Topics in Ecology
EEB1430H	Modelling in Ecology and Evolutionary Biology
EEB1440H	Special Topics in Evolution
EEB1450H	Special Topics in Ecology and Evolution A
EEB1451H	Special Topics in Ecology and Evolution B
EEB1452H	Special Topics: Evolution/Ecology Module I
EEB1453H	Special Topics: Evolution/Ecology Module II
EEB1454H	Special Topics: Evolution/Ecology Module III
EEB1455H	Special Topics: Evolution/Ecology Module IV
EEB1456H	Special Topics: Evolution/Ecology Module V

Graduate Courses With Significant Undergraduate Content

These courses will normally constitute only a minor component of the required credits.

Course Code	Course Title
EEB1443H	Phylogenetic Principles
EEB1458H	Evolutionary Quantitative Genetics
EEB1459H	Theoretical Population Genetics
EEB1460H	Molecular Evolution
EEB1462H	Phylogenetic Systematics

Economics

Economics: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Economics

MA

- Emphases:
  - Economic Data Analytics;
  - Economic Policy and Welfare Analysis;
  - Economic Research;
  - Economic Sustainability;
  - Finance, Money, and Banking

PhD

Combined Degree Programs

- STG, Law, Juris Doctor / Economics, MA
- STG, Law, Juris Doctor / Economics, PhD

Overview

The Department of Economics at the University of Toronto is large and highly ranked. The teaching and research interests of its graduate faculty members span a wide range of subjects and cover theory, applied data analysis and econometric methodology.

The department offers both MA and PhD programs in economics. The goal of the graduate programs is to further the student's capacity for economic analysis through rigorous instruction in theory, econometrics and a wide variety of fields. The MA and PhD course and research offerings provide great diversity, breadth and scope; students can readily specialize in almost any area of interest. Additionally, students may take suitable elective courses in statistics, mathematics, computer science and other allied fields. Students benefit from Economics' close association with faculty members from related programs, such as those at the Rotman School of Management. They also benefit from the University of Toronto's excellent facilities, including the best university library in Canada.

The department's programs attract students from across Canada and all parts of the globe. Approximately 65 new MA students and 15 to 20 new PhD students are enrolled each year with total combined enrolment of approximately 150.

MA graduates find employment in their area of interest in the public, private and not-for-profit sectors. They also successfully pursue PhD programs in economics. PhD graduates obtain academic placement and employment in the public and private sectors.

The Department of Economics and the Rotman School of Management also offer a professional **Master of Financial Economics (MFE)** program.

Contact and Address

MA and PhD:
Web: www.economics.utoronto.ca
Email:
www.economics.utoronto.ca/index.php/index/index/contact
Telephone: (416) 978-4544

MA and PhD Graduate Office
Department of Economics, Max Gluskin House
University of Toronto, 150 St. George Street
Toronto, Ontario M5S 3G7 Canada

Economics: Graduate Faculty

Full Members

Aguirregabiria, Victor - BA, MSc, PhD
Aivazian, Varouj - BS, MA, PhD
Alexopoulos, Michelle - BSc, MA, PhD
Baker, Michael - BComm, MA, PhD
Bar-Isaac, Heski - BA, MSc, PhD
Baum-Snow, Nathaniel - AB, PhD
Benjamin, Dwayne - BSc, MA, PhD
Blouin, Arthur - BA, MA, PhD
Bobonis, Gustavo - BA, PhD
Brandt, Loren - BS, MS, PhD
Burda, Martin - BSc, MA, PhD
Carroll, Gabriel - BA, PhD
Celik, Murat - PhD
Damiano, Ettore Vincenzo - AB, MA, MPH, PhD ***(Chair and Graduate Chair)***
Deb, Rahul - MA, MPH, PhD
Duarte, Margarida - MEc, PhD
Eli, Shari - BA, PhD
Halevy, Yoram - BA, MA, PhD
Hall, Jonathan - BA, PhD
Hamilton, Gillian - MEc, PhD
Heblich, Stephan - PhD
Kambourov, Gueorgui - BA, MA, DPhil
Kroft, Kory - BA, MA, PhD
Kuruscu, Burhan - BSc, MA, PhD
Lacetera, Nicola - PhD
Luo, Yao - BS, MA, PhD
McMillan, Robert - AB, Dphil
Melino, Angelo - BA, PhD
Mondria, Jordi - BA, MA, PhD
Moorthy, Sridhar - BSc, MBA, MS, PhD
Morrow, Peter - BA, MA, PhD
Mourifie, Ismael - BMath, MSc, PhD
Oreopoulos, Philip - BA, MA, PhD
Osborne, Martin - BA, PhD
Ozkan, Serdar - MEc, PhD

Peski, Marcin - BA, MA, MA, PhD
Pitchik, Carolyn - BA, MSc, PhD
Restuccia, Diego - BA, MA, PhD
Roesler, Anne-Katrin - PhD
Shi, Xianwen - PhD
Siow, Aloysius - BA, PhD
Smart, Michael - BA, BA, PhD
Souza Rodrigues, Eduardo Augusto - PhD
Steinberg, Joseph - BA, PhD
Stewart, Colin - BSc, MA, MPH, MSc, PhD ***(Associate Chair, Graduate Studies)***
Strange, William - BA, MA, PhD
Trefler, Daniel - BA, MPH, PhD
Tsoy, Anton - PhD
Van Effenterre, Clementine - PhD
Wan, Yuanyuan - BA, MA, PhD
Webb, Ryan - BA, MA, PhD
Wolthoff, Ronald - PhD
Yatchew, Adonis - BA, MA, PhD

Members Emeriti

Dewees, Donald - LLB, BScEE, PhD
Faig, Miquel - MEc, PhD
Gunderson, Morley - BA, MA, PhD

Associate Members

Baysan, Ceren - BCom, MS, PhD
Chen, Yanyou - MA, PhD
Hussain, Ajaz - BA, PhD
Koffi, Marlene - MSc, PhD
Rempel, Mark - BA, MA, MA, PhD
Stepner, Michael - BA, PhD
Wang, Tianyi - MA, PhD

Economics: Economics MA

The MA is a coursework-only program (i.e., has no thesis requirement) that may be taken on a full-time or part-time basis. It is designed for individuals who wish to work in the public, private, and not-for-profit sectors, and also for students intending to pursue a PhD in economics.

Master of Arts

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Economics' additional admission requirements stated below.
- An appropriate bachelor's degree with at least a mid-B (75%) standing in the final year of the program.
- Successful completion of full-year courses in calculus, intermediate microeconomics, intermediate macroeconomics, and statistics.
- Admission is competitive, so accepted applicants will normally have achieved a standing considerably higher than the minimum of at least a mid-B (75%) in the final year.
- All applicants who do not hold a degree from a Canadian university must submit an official Graduate Record Examination (GRE) General Test score. Applicants who hold a degree from a Canadian university are strongly encouraged to submit an official GRE General Test score. See the departmental website for details.

Completion Requirements

- Successful completion of **4.5 full-course equivalents (FCEs)** as follows:
  - 0.5 FCE mathematics and statistics course (ECO1010H);
  - 4.0 FCEs including the core courses in micro (ECO1200H), macro (ECO1100H), and econometrics (ECO1400H). Five 0.5 FCE elective courses are selected from current courses or may be graduate courses offered by another unit, provided they make a strong contribution to the student's economic training. At most two (1.0 FCE) of the five courses may be offered by another unit, and these courses must be approved by the Associate Chair, Graduate Studies. Units that offer courses that we may approve include Mathematics, Statistical Sciences, and the Rotman School of Management.
  - An MA student may be permitted to fulfil core course requirements by taking the corresponding PhD-level core courses (ECO2200H and ECO2201H for microeconomics, ECO2100H and ECO2101H for macroeconomics, or ECO2400H and ECO2401H for econometrics). To make this substitution, the student will be required to take the PhD-level ECO2010H (mathematics and statistics course), and must obtain written permission from the Associate Chair, Graduate Studies prior to starting the mathematics and statistics course in August.

Mode of Delivery: In person
Program Length: 2 sessions full-time (typical registration sequence: FW); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Economics: Economics PhD

The Department of Economics offers two PhD programs: a regular-entry program for students who have completed a master's degree in economics or a closely related field, and a direct-entry program for students with only an undergraduate degree. Both are full-time programs.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also

satisfy the Department of Economics' additional admission requirements stated below.
- Minimum B+ standing in an MA program in economics. Admission is competitive, so accepted applicants will normally have achieved a standing considerably higher than the minimum B+.
- A strong preparation in advanced mathematics, statistics, and economics, including successful completion of MA-level microeconomic theory, macroeconomic theory, and econometrics.
- All applicants who do not hold a degree from a Canadian university must submit an official Graduate Record Examination (GRE) General Test score. Applicants who hold a degree from a Canadian university are strongly encouraged to submit an official GRE General Test score. See the departmental website for details.

Completion Requirements

- Students must maintain a minimum average of B+ throughout their **coursework** and successfully complete a total of **4.0 full-course equivalents (FCEs)** as follows:
  - **Year 1:** 3.0 FCEs, normally consisting of two half courses in each area:
    - Microeconomics (ECO2200H and ECO2201H)
    - Macroeconomics (ECO2100H and ECO2101H)
    - Econometrics (ECO2400H and ECO2401H)
  - **Year 2:** at least two half courses (1.0 FCE), including the required courses for a major field of specialization and a minor field of specialization.
    - Students must write an original paper in Year 2 and present it in the relevant workshop in the Fall session of Year 3.
    - Students must also take ECO4060Y *Graduate Research Seminar* in Year 2 and complete it by the end of Year 3.
    - Suitable PhD-level courses taken by a student in the MA program in the Department of Economics may, with the permission of the Associate Chair, Graduate Studies, fulfil a portion of the major and minor field requirements of the PhD program.
- A **thesis** based on original research.
- **General examinations**
  - Successful completion of **theory comprehensive** examinations. Students are required to take two comprehensive examinations in microeconomic and macroeconomic theory after the end of the Winter session (usually June) in Year 1 of their program. Performance on these exams is evaluated on a distinction/pass/fail basis. If a theory comprehensive examination is failed on the first attempt, it must be re-taken later in the Summer (usually in August) of the same year.
  - If a student does not obtain a minimum grade of A in every course required for their major field of specialization, or took some of the required courses during their MA in Economics program at the University of Toronto, the student is required to take a **field comprehensive examination** in their major field of specialization after the end of the Winter session in Year 2 (usually June). If the exam is failed, it must be re-taken later in the Summer (usually in August) of the same year. The major fields of specialization offered regularly are:
    - Behavioural Economics
    - Econometrics
    - Economic Development
    - Financial Economics
    - Industrial Organization
    - International Economics
    - Labour Economics
    - Macroeconomics
    - Microeconomic Theory
    - Public Economics.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Economics' additional admission requirements stated below.
- Minimum A– standing in the last two years of study in a bachelor's program in economics or a related field, such as finance, statistics, or mathematics. Because admission is competitive, accepted applicants will normally have achieved a standing considerably higher than the minimum A–.
- A strong preparation in advanced mathematics, statistics, and economics.
- All applicants who do not hold a degree from a Canadian university must submit an official Graduate Record Examination (GRE) General Test score. Applicants who hold a degree from a Canadian university are strongly encouraged to submit an official GRE General Test score. See the departmental website for details.

Completion Requirements

- Students must maintain a minimum average of B+ throughout their **coursework** and successfully complete a total of **6.0 full-course equivalents (FCEs)** as follows:
  - **Year 1:** normally two half courses in each area (3.0 FCEs), as follows:
    - Microeconomics (ECO2200H and ECO2201H)
    - Macroeconomics (ECO2100H and ECO2101H)
    - Econometrics (ECO2400H and ECO2401H)
  - **Year 2:** six half courses (3.0 FCEs), including the required courses for a major field of specialization and a minor field of specialization.
    - Students must write an original paper in Year 2 and present it in the relevant workshop in the Fall session of Year 3.
    - Students must also take ECO4060Y *Graduate Research Seminar* in Year 2 and complete it by the end of Year 3.
- A **thesis** based on original research.
- **General examinations.**
  - Successful completion of **theory comprehensive examinations**. Students must take two comprehensive examinations in microeconomic and

macroeconomic theory after the end of the Winter session (usually June) in Year 1 of their program. Performance on these exams is evaluated on a distinction/pass/fail basis. If a theory comprehensive examination is failed on the first attempt, it must be re-taken later in the Summer (usually in August) of the same year.
    - If a student does not obtain a minimum grade of A in every course required for their major field of specialization, the student must take a **field comprehensive examination** in their major field of specialization after the end of the Winter session in Year 2 (usually June). If the exam is failed, it must be re-taken later in the Summer (usually in August) of the same year. The major fields of specialization offered regularly are:
        - Behavioural Economics
        - Econometrics
        - Economic Development
        - Financial Economics
        - Industrial Organization
        - International Economics
        - Labour Economics
        - Macroeconomics
        - Microeconomic Theory
        - Public Economics.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Economics: Emphases

Economic Data Analytics

Participating Programs:

- Economics MA

Students who wish to complete the emphasis in Data Analytics must successfully complete **1.5 full-course equivalents (FCEs)** as part of their MA program:

- ECO2425H *Applied Causal Machine Learning* and
- any two (1.0 FCE) of ECO1450H, ECO1502H, ECO2104H, ECO2404H, ECO2450H, ECO2460H, ECO2905H.

Economic Policy and Welfare Analysis

Participating Programs:

- Economics MA

Students who wish to complete the emphasis in Economic Policy and Welfare Analysis must successfully complete **1.5 full-course equivalents (FCEs)** as part of their MA program:

- any three of ECO1900H, ECO1960H, ECO2120H, ECO2600H, ECO2601H, ECO2607H, ECO2620H.

Economic Research

Participating Programs:

- Economics MA

Students who wish to complete the emphasis in Economic Research must successfully complete **1.5 full-course equivalents (FCEs)** as part of their MA program:

- ECO1060H *Research Paper* and
- at least two courses at the 2000 or 3000 level.

Economic Sustainability

Participating Programs:

- Economics MA

Students who wish to complete the emphasis in Economic Sustainability must successfully complete **1.5 full-course equivalents (FCEs)** as part of their MA program:

- ECO2606H *Climate Economics* and
- any two of ECO1960H, ECO2450H, ECO2701H, ECO2703H.

Finance, Money, Banking

Participating Programs:

- Economics MA

Students who wish to complete the emphasis in Finance, Money, and Banking must successfully complete **1.5 full-course equivalents (FCEs)** as part of their MA program:

- ECO1500H *Financial Economics I* and
- any two (1.0 FCE) of ECO1300H, ECO1301H, ECO1501H, ECO1502H, ECO1551H, ECO2107H, ECO2411H.

Economics: Economics MA, PhD Courses

Not all courses are offered every year. Please refer to the department's website for a current course list.

Preliminary Courses

Course Code	Course Title
ECO1010H	Mathematics and Statistics for MA and MFE Students
ECO2010H	Mathematics and Statistics for PhD Students

Core Courses in Economic Theory

Course Code	Course Title
ECO1100H	Economic Theory — Macro
ECO1200H	Economic Theory — Micro
ECO2100H	Macroeconomic Theory I
ECO2101H	Macroeconomic Theory II
ECO2105H	Applied Macroeconomics
ECO2200H	Microeconomic Theory I
ECO2201H	Microeconomic Theory II
ECO2205H	Applied Microeconomics

Advanced Microeconomic Theory

Course Code	Course Title
ECO3200H	Advanced Microeconomic Theory I
ECO3201H	Advanced Microeconomic Theory II
ECO3202H	Topics in Microeconomic Theory

Behavioural and Experimental Economics

Course Code	Course Title
ECO1250H	Topics in Behavioural Economics
ECO3250H	Behavioural Economics

Econometrics

Course Code	Course Title
ECO1400H	Econometrics
ECO1450H	Methods for Empirical Microeconomics
ECO2400H	Econometrics I
ECO2401H	Econometrics II
ECO2404H	Empirical Applications of Economic Theory
ECO2405H	Applied Econometrics
ECO2411H	Financial Econometrics
ECO2425H	Applied Causal Machine Learning
ECO2460H	Economic Applications of Machine Learning
ECO3400H	Topics in Econometrics
ECO3401H	Advanced Econometrics
ECO3450H	Advanced Methods for Empirical Microeconomics

Economic Development

Course Code	Course Title
ECO1700H	Economic Development
ECO1730H	Economic Development of China
ECO2701H	Development Economics I
ECO2703H	Development Economics II

Economic History

Course Code	Course Title
ECO2750H	Topics in North American Economic History

Financial Economics

Course Code	Course Title
ECO1500H	Financial Economics: Asset Pricing
ECO1501H	Financial Economics: Corporate Finance
ECO1502H	Empirical Methods for Financial Economics
ECO1550H	Economics of Financial Risk Management
ECO1551H	Topics in Risk Management

Industrial Organization

Course Code	Course Title
ECO1900H	Industrial Organization and Competition Policy
ECO2905H	The Economics of Algorithms
ECO3900H	Industrial Organization I
ECO3901H	Industrial Organization II

International Economics

Course Code	Course Title
ECO1300H	International Macroeconomics
ECO1301H	International Financial Markets
ECO2302H	Networks in Trade and Macroeconomics
ECO3300H	International Trade Theory
ECO3301H	International Trade II
ECO3302H	Topics in International Trade
ECO3304H	International Monetary Theory

Labour Economics

Course Code	Course Title
ECO3800H	Labour Economics I
ECO3801H	Labour Economics II

Macroeconomics

Course Code	Course Title
ECO1102H	Macroeconometric Models for Policy Analysis and Forecasting
ECO2104H	Quantitative Macroeconomics
ECO2107H	Monetary Theory
ECO2120H	Topics in Growth and Development
ECO3100H	Frontiers in Macroeconomics
ECO3101H	Topics in Macroeconomics

Public Economics

Course Code	Course Title
ECO2600H	Public Economics I
ECO2601H	Public Economics II
ECO2606H	Climate Economics
ECO2607H	Economics of Education Policy
ECO2610H	Health Economics
ECO2620H	Topics in Health Economics

Other Courses

Course Code	Course Title
ECO1060H	Research Paper
ECO1320H	International Trade Regulation
ECO1950H	Economic Analysis of Law
ECO1960H	Energy and Regulation
ECO2450H	Structural Approaches to Climate Economics
ECO2650H	Political Economy
ECO2850H	Urban and Regional Economics
ECO4050H	Special Field Reading Course[#]
ECO4051H	Special Field Reading Course#
ECO4060Y	Graduate Research Seminar

[#] *The department is normally prepared to supervise reading courses in a variety of fields. Reading courses are available only to students who have the requisite preparation and only at the discretion of faculty members.*

Electrical and Computer Engineering

Electrical and Computer Engineering: Introduction

Faculty Affiliation

Applied Science and Engineering

Degree Programs

Electrical and Computer Engineering

MASc

- Fields:
  - Biomedical Engineering;
  - Communications;
  - Computer Engineering;
  - Electromagnetics;
  - Electronics;
  - Energy Systems;
  - Photonics;
  - Systems Control
- Emphases:
  - Sustainable Energy

MEng

- Emphases:
  - Biomedical Engineering;
  - Communications;
  - Computer Engineering;
  - Data Analytics and Machine Learning;
  - Electromagnetics;
  - Electronics;
  - Energy Systems;
  - Engineering and Globalization;
  - Entrepreneurship, Leadership, Innovation and Technology in Engineering (ELITE);
  - Identity, Privacy and Security (IPS);
  - Photonics;
  - Robotics;
  - Sustainable Energy;
  - Systems Control

PhD

- Fields:
  - System Control
  - Biomedical Engineering;
  - Communications;
  - Computer Engineering;
  - Electromagnetics;
  - Electronics;
  - Energy Systems;
  - Photonics
- Emphases:
  - Sustainable Energy

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Biomedical Engineering** (admissions have been administratively suspended)
  - Electrical and Computer Engineering, MASc, PhD
- **Neuromodulation**
  - Electrical and Computer Engineering, MASc, PhD
- **Psychology, Psychiatry and Engineering**
  - Electrical and Computer Engineering, MASc, PhD
- **Robotics**
  - Electrical and Computer Engineering, MASc, PhD

Overview

During the past few decades, we have witnessed exciting new discoveries and developments in almost every aspect of electrical and computer engineering, including microelectronics, computers, communication networks, photonics, alternative energy systems, robotics, and many others. At the intersection of computers and communications there are opportunities that are limited only by our imagination. Along with these highly visible developments, there are equally impressive achievements in building the theoretical underpinnings of the respective areas of knowledge. Graduate studies provide the highly qualified individuals who are the lifeblood of the research leading to these advances.

The Department of Electrical and Computer Engineering is engaged in the pursuit and dissemination of knowledge across a wide range of areas of engineering and applied science — from the fabrication of atomic-level structures with special optical properties, through to the technologies that have revolutionized our world, such as microelectronics, computer systems, software, and networks.

The department conducts research in the following fields of study: Biomedical Engineering, Communications, Computer Engineering, Electromagnetics, Electronics, Energy Systems, Photonics, and System Control.

Contact and Address

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The Edward S. Rogers Sr. Department of Electrical and Computer Engineering
University of Toronto
Sandford Fleming Building
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Toronto, Ontario M5S 3G4 Canada

Electrical and Computer Engineering: Graduate Faculty

Full Members

Aarabi, Parham - BASc, MASc, PhD
Abdelrahman, Tarek - BSc, MSc, PhD
Adve, Ravi - BTech, PhD
Aitchison, J. Stewart - BSc, PhD
Anderson, Jason Helge - BSc, MASc, PhD
Bardakjian, Berj - BSc, BEd, MASc, PhD
Betz, Vaughn - BSc, MS, PhD
Broucke, Mireille - BScEE, MS, PhD
Brown, Stephen - BSE, MASc, PhD
Chan Carusone, Anthony - BASc, PhD
Chapman, Margaret - PhD
Chechik, Marsha - BS, SM, PhD
Cheng, Hai-Ling - BSc, MS, PhD
Dawson, Francis - BSc, BASc, MASc, PhD
Draper, Stark - BA, PhD
Eleftheriades, George - DipIng, MSEE, PhD
Enright Jerger, Natalie - BSc, MSc, PhD
Frey, Brendan - BSc, MSc, PhD
Garcia-Luna-Aceves, J.J. - PhD
Genov, Roman - BS, MS, PhD
Goel, Ashvin - BTech, MS, PhD
Gulak, Glenn - BASc, MSc, PhD
Hatzinakos, Dimitrios - DipIng, MSc, PhD
Helmy, Amr - BSc, MSc, PhD
Herman, Peter - BEng, MSc, PhD
Hum, Sean - BSc, MSc, PhD, PEng
Iravani, Reza - BSc, MSc, PhD
Jacobsen, Hans-Arno - MCS, PhD
Jeffrey, Mark Christopher - PhD, PhD
Johns, David Andrew - BASc, MASc, PhD
Kherani, Nazir - BASc, MASc, PhD
Khisti, Ashish - BASc, PhD
Kschischang, Frank - BASc, MASc, PhD
Kundur, Deepa - BASc, MASc, PhD ***(Chair and Graduate Chair)***
Lehn, Peter - BScEE, MSc, PhD
Leon-Garcia, Alberto - BS, MS, PhD
Levi, Ofer - BSc, MSc, PhD
Li, Baochun - BEng, MSc, DPhil
Liang, Ben - BS, MS, PhD
Lie, David - BASc, MS, PhD
Liebeherr, Jorg - DipIng, PhD
Liscidini, Antonio - MSEE, DE
Lo, Hoi-Kwong - BA, MA, MS, PhD
Long, Fan - PhD
Maggiore, Manfredi - MS, PhD
Mann, Steve - BSc, BASc, MSc, PhD
Mojahedi, Mo - BSE, MS, PhD ***(Associate Chair, Graduate Studies)***
Moshovos, Andreas - BSc, MS, PhD
Nachman, Adrian - BSc, MA, PhD
Najm, Farid - BE, MSEE, PhD
Ng, Wai Tung - BSc, MASc, PhD
Papernot, Nicolas - BS, MSc, PhD
Pavel, Lacra - BEng, PhD
Plataniotis, Konstantinos - DipIng, MS, PhD
Poon, Joyce - BASc, MS, PhD
Prodic, Aleksandar - BS, MSc, PhD
Qian, Li - BASc, MASc, PhD
Rose, Jonathan - BSc, MASc, PhD
Ruda, Harry - BSc, PhD
Sargent, Edward - BEng, PhD
Sarris, Costas - BE, MS, PhD
Scardovi, Luca - MSc, PhD
Sejdic, Ervin - PhD, PhD
Sheikholeslami, Ali - BSc, MASc, PhD
Sousa, Elvino - BASc, MASc, PhD
Stumm, Michael - MS, PhD
Sun, Yu - BS, MS, MS, PhD
Tate, Zeb - BS, MS, PhD
Taylor, Josh - BS, SM, PhD
Trescases, Olivier - BASc, MASc, PhD
Triverio, Piero - BScEE, MS, PhD
Truong, Kevin - BASc, PhD
Valaee, Shahrokh - BScEE, MSEE, PhD
Veneris, Andreas - BSc, MSc, PhD
Voinigescu, Sorin - MS, PhD
Wong, Willy - BSc, MSc, PhD
Yoo, Paul - BASc, MSc, PhD
Yu, Wei - BASc, MSEE, PhD
Yuan, Ding - PhD
Zhou, Shurui - PhD
Zhu, Jianwen - BS, MS, PhD

Members Emeriti

Blake, Ian - BASc, MASc, PhD
Bonert, Richard - DipIng, DE
Chow, Paul - BASc, MASc, PhD
Cobbold, Richard - PhD
Davison, Edward - BASc, MA, PhD, ARCT
Iizuka, Keigo - BS, ME, MS, PhD
Kunov, Hans - MSc, PhD
Kwong, Raymond - SB, SM, PhD
Pasupathy, Subbarayan - BE, MPH, PhD
Salama, Andre - BASc, MASc, PhD
Semlyen, Adam - PhD, PhD
Smith, Peter - BSc, MSc, PhD
Vranesic, Zvonko - BASc, MASc, PhD
Wonham, Walter - BEng, PhD
Zukotynski, Stefan - MASc, PhD

Associate Members

Al Janaideh, Mohammad - PhD
Asare, Philip - BScEE, MSEE, PhD
Bereyhi, Ali - PhD
Chisholm, William - BASc, MEng, PhD
de Lara, Eyal - BS, MS, PhD
Dong, Min - BEng, PhD
Eckford, Andrew - BE, MASc, PhD
Emara, Salma - PhD
Eyolfson, Jonathan - PhD
Gibson, Courtney - BASc, MASc
Goldenberg, Anna - PhD, PhD
Lawryshyn, Yuri - DipIng, BASc, MASc, MBA, PhD
Lee, Chi-Guhn - DPhil
Liu, Xilin - PhD
Makhzani, Alireza - PhD
Maljevic, Ivo - PhD
Shokrollah-Timorabadi, Hamid - PhD
Sivanandam, Suresh - PhD
Stickel, Micah - BASc, MASc, PhD
Strauss, John - MD
Tavallaei, Mohammad Ali - PhD
Valiante, Taufik - BSc, MD, PhD
Zhang, Xiao-ping - PhD
Zukotynski, Katherine - MD, PhD

Electrical and Computer Engineering: Electrical and Computer Engineering MASc

The **Master of Applied Science (MASc) program** provides students with an opportunity to pursue advanced studies in the particular area of interest and an opportunity to engage in research.

MASc Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Electrical and Computer Engineering's additional admission requirements stated below.
- An appropriate bachelor's degree in electrical and computer engineering or its equivalent from a recognized university.
- High academic standing equivalent to a mid-B or better, normally demonstrated by an average grade in the final year or over senior-level courses.

Completion Requirements

- Each student's program of study must receive the approval of the Department of Electrical and Computer Engineering and, in general, shall consist of a research or design project on which a thesis must be submitted.
- During Year 1, students are required to attend the ECE Colloquium and complete JDE1000H *Ethics in Research*.
- **Coursework.** Normally, completion of **2.5 graduate full-course equivalents (FCEs)** or five half courses. Students whose undergraduate preparation does not include the study of subjects deemed to be necessary for research in the chosen area will be required to complete additional courses.
- **Thesis.** This thesis shall demonstrate the student's ability to do independent work in relating, organizing, and extending existing techniques where required, and in suggesting and developing new approaches to problems in an area of applied science and engineering.
- Students have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Electrical and Computer Engineering MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Electrical and Computer Engineering: Electrical and Computer Engineering MEng

The **Master of Engineering (MEng) program** is designed to provide professional training beyond the undergraduate level and to accelerate careers with specialized engineering expertise needed in business, government, and industry.

The MEng program can be taken on a full-time, extended full-time, or part-time basis.

MEng Program (Full-Time and Part-Time Options)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Electrical and Computer Engineering's additional admission requirements stated below.
- An appropriate bachelor's degree in electrical and computer engineering or its equivalent from a recognized university.
- High academic standing equivalent to a mid-B or better, normally demonstrated by an average grade in the final year or over senior-level courses.

Completion Requirements

- **Coursework.** Normally, completion of **4.5 graduate full-course equivalents (FCEs)** or nine half courses for applicants with adequate undergraduate preparation. At least 2.5 graduate FCEs or five half courses must be drawn from graduate courses offered by the Department of Electrical and Computer Engineering.
- Students may choose to complete an **engineering project** with an equivalent value of 1.5 FCEs. Students choosing the project option will be required to complete a total of 3.0 FCEs in addition to the project. In order to pursue the project option, the student must secure a professor who will act as the supervisor throughout the project.
- Part-time students normally complete the requirements in nine sessions (three years). The limit is four half courses per year and two half courses per session.
- Students have the option of completing an emphasis in Biomedical Engineering; Communications; Computer Engineering; Data Analytics and Machine Learning; Electromagnetics; Electronics; Energy Systems; Engineering and Globalization; Entrepreneurship, Leadership, Innovation and Technology in Engineering (ELITE); Identity, Privacy and Security (IPS); Photonics; Robotics; Sustainable Energy; or Systems Control as part of their degree program. Please see details in the Electrical and Computer Engineering Emphases section.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 9 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MEng Program (Extended Full-Time Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Electrical and Computer Engineering's additional admission requirements stated below.
- An appropriate bachelor's degree in electrical and computer engineering or its equivalent from a recognized university.
- High academic standing equivalent to a mid-B or better, normally demonstrated by an average grade in the final year or over senior-level courses.

Completion Requirements

- **Coursework.** Normally, completion of **4.5 graduate full-course equivalents (FCEs)** or nine half courses for applicants with adequate undergraduate preparation. At least 2.5 graduate FCEs or five half courses must be drawn from graduate courses offered by the Department of Electrical and Computer Engineering.
- Students may choose to complete an **engineering project** with an equivalent value of 1.5 FCEs. Students choosing the project option will be required to complete a total of 3.0 FCEs in addition to the project. In order to pursue the project option, the student must secure a professor who will act as the supervisor throughout the project.
- Students are expected to complete the requirements in six sessions (two years). The limit is six half courses per year and three half courses per session.
- Students have the option of completing an emphasis in Biomedical Engineering; Communications; Computer Engineering; Data Analytics and Machine Learning; Electromagnetics; Electronics; Energy Systems; Engineering and Globalization; Entrepreneurship, Leadership, Innovation and Technology in Engineering (ELITE); Identity, Privacy and Security (IPS); Photonics; Robotics; Sustainable Energy; or Systems Control as part of their degree program. Please see details in the Electrical and Computer Engineering Emphases section.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Electrical and Computer Engineering: Electrical and Computer Engineering PhD

The **Doctor of Philosophy (PhD) program** is designed for exceptional individuals who intend to pursue a career in fundamental or applied research.

Applicants may enter the PhD program via one of three routes: 1) following completion of the University of Toronto master's degree in Electrical and Computer Engineering or its equivalent from a recognized university; 2) transfer from the University of Toronto MASc program; or 3) direct entry for exceptionally qualified students with an appropriate bachelor's degree from a recognized university.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Electrical and Computer Engineering's additional admission requirements stated below.
- Admission may be granted for applicants with a University of Toronto master's degree in Electrical and Computer Engineering with an overall average of at least B+, or its equivalent from a recognized university.
- The department must be satisfied of the student's ability to do advanced research before admission may be granted.

Completion Requirements

- **Coursework.** Normally, students who enter the PhD with a master's degree will complete **2.5 full-course equivalents (FCEs)** not previously used for other degree credit. Students may receive a course reduction of up to 1.0 FCE depending on their PhD research needs in relation to their studies at the master's level. The number of required courses will be determined by the Associate Chair, Graduate Studies, in consultation with the PhD supervisor.
- During Year 1, each student must:
  - pass a **qualifying oral examination** in the area of research;
  - attend the ECE Colloquium;
  - complete JDE1000H *Ethics in Research* if they have not already done so in a previous University of Toronto master's program.
- **Thesis.**
- Students have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Electrical and Computer Engineering MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- Admission may be granted to applicants via transfer from the MASc to the PhD program, upon completion of 2.5 graduate full-course equivalents (FCEs) with an overall average of at least B+.

Completion Requirements

- **Coursework.** Normally, students who transfer from the MASc to the PhD will complete **1.5 graduate FCEs**, in addition to courses completed while registered in the MASc program. Students may be required to complete up to 1.0 additional FCE depending on their PhD research needs in relation to their studies at the master's level. The number of required courses will be determined by the Associate Chair, Graduate Studies, in consultation with the PhD supervisor.
- During Year 1, each student must:
  - pass a **qualifying oral examination** in the area of research;
  - attend the ECE Colloquium;
  - complete JDE1000H *Ethics in Research* if they have not already done so in a previous University of Toronto master's program.
- **Thesis.**
- Students have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Electrical and Computer Engineering MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Electrical and Computer Engineering's additional admission requirements stated below.
- Admission may be granted by direct entry for exceptionally qualified students with an appropriate bachelor's degree from a recognized university.
- The department must be satisfied of the student's ability to do advanced research before admission may be granted.

Completion Requirements

- **Coursework.** Students must complete **4.0 graduate full-course equivalents (FCEs).**
- During Year 1, each student must:
  - pass a qualifying oral examination in the area of research;
  - attend the ECE Colloquium;
  - complete JDE1000H *Ethics in Research* if they have not already done so in a previous University of Toronto master's program.
- **Thesis.**
- Students have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Electrical and Computer Engineering MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Electrical and Computer Engineering: Emphases

Biomedical Engineering

Participating Programs:

- Electrical and Computer Engineering MEng

MEng students must successfully complete **at least four courses** from those listed below. Students may double-count one course at most towards any ECE emphasis.

- Any JEB14XXH course
- ECE1774H *Sensory Cybernetics*
- ECE2500Y *Master of Engineering Project* (topic in biomedical engineering; counts as one course towards the emphasis).

Students may include other biomedical engineering-related courses subject to the approval of the ECE Associate Chair for Graduate Studies.

Communications

Participating Programs:

- Electrical and Computer Engineering MEng

MEng students must successfully complete **at least four courses** from those listed below. Students may double-count one course at most towards any ECE emphasis.

- ECE537H1 *Random Processes*
- Any ECE15XXH course
- ECE2500Y *Master of Engineering Project* (topic in communications; counts as one course towards the emphasis).

Computer Engineering

Participating Programs:

- Electrical and Computer Engineering MEng

MEng students must successfully complete **at least four courses** from those listed below. Students may double-count one course at most towards any ECE emphasis.

- ECE516H1 *Intelligent Image Processing*
- ECE532H1 *Digital Systems Design*
- ECE552H1 *Computer Architecture*
- ECE568H1 *Computer Security*
- Any ECE17XXH course
- ECE2500Y *Master of Engineering Project* (topic in computer engineering; counts as one course towards the emphasis).

Data Analytics and Machine Learning

Participating Programs:

- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Electrical and Computer Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

To be admitted to the emphasis in Data Analytics and Machine Learning, MEng students must first successfully complete a **prerequisite course APS1070H (0.5 full-course equivalent [FCE])**.

Subsequently, to earn the emphasis, students must successfully complete **four additional half courses (2.0 FCEs)** from the list of core courses or elective courses. These must include at least one core course; the remaining courses must be selected from the list of elective courses.

Students must have completed the prerequisite course APS1070H before taking any of the core courses.

Prerequisite Course

APS1070H *Foundations of Data Analytics and Machine Learning*.

Core Courses

CHE1147H *Data Mining in Engineering*,
ECE1513H *Introduction to Machine Learning*,
MIE1624H *Introduction to Data Science and Analytics*,
MIE1626H *Data Science Methods and Statistical Learning*,
MSE1065H *Application of Artificial Intelligence in Materials Design*.

Elective Courses

APS502H1, APS1005H, APS1017H, APS1022H, APS1050H, APS1051H, APS1052H, APS1053H, APS1080H, BME1570H,
CEM1002H,
CHE507H1, CHE1108H, CHE1148H, CHE1434H,
CIV1504H, CIV1506H, CIV1507H, CIV1532H, CIV1538H, CIV1599H,
ECE537H1, ECE1504H, ECE1505H, ECE1657H, ECE1779H, ECE1786H,
MIE562H1, MIE1077H, MIE1413H, MIE1501H, MIE1512H, MIE1513H, MIE1517H, MIE1520H, MIE1620H, MIE1621H, MIE1622H, MIE1623H, MIE1625H, MIE1628H, MIE1653H, MIE1666H, MIE1721H, MIE1727H, MIE1769H,
MSE1063H.

Electromagnetics

Participating Programs:

- Electrical and Computer Engineering MEng

MEng students must successfully complete **at least four courses** from those listed below. Students may double-count one course at most towards any ECE emphasis.

- Any ECE12XXH course
- ECE2500Y *Master of Engineering Project* (topic in electromagnetics; counts as one course towards the emphasis).

Electronics

Participating Programs:

- Electrical and Computer Engineering MEng

MEng students must successfully complete **at least four courses** from those listed below. Students may double-count one course at most towards any ECE emphasis.

- Any ECE13XXH course
- ECE2500Y *Master of Engineering Project* (topic in electronics; counts as one course towards the emphasis).

Energy Systems

Participating Programs:

- Electrical and Computer Engineering MEng

MEng students must successfully complete **at least four courses** from those listed below. Students may double-count one course at most towards any ECE emphasis.

- Any ECE10XXH course
- ECE2500Y *Master of Engineering Project* (topic in energy systems; counts as one course towards the emphasis).

Engineering and Globalization

Participating Programs:

- Aerospace Science and Engineering MEng
- Biomedical Engineering MEng
- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Electrical and Computer Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete **four half courses (2.0 full-course equivalents [FCEs])** from the following lists, with at least two half courses (or one full course) taken from Group A.

Group A

APS510H1, APS530H1, APS1420H, JCR1000Y (full-year course).

Group B

APS1015H, APS1020H, APS1024H, CHL5700H, CIV1399H.

Note: Students who choose to pursue an MEng project in their home department that aligns with the Centre for Global Engineering (CGEN)'s disciplinary focus, as deemed by the CGEN Director, may count the project as one required Group B course.

Students who complete the requirements of the emphasis in Engineering and Globalization and wish to obtain a notation on their transcript should contact the Faculty Graduate Studies office.

Entrepreneurship, Leadership, Innovation and Technology in Engineering

Participating Programs:

- Aerospace Science and Engineering MEng
- Biomedical Engineering MEng
- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Electrical and Computer Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete **any four of the following courses (2.0 full-course equivalents [FCEs])**:

Leadership

TEP1010H, TEP1011H, TEP1026H, TEP1027H, TEP1029H, TEP1030H, TEP1501H, TEP1502H, TEP1601H.

Entrepreneurship and Innovation

APS511H1, APS1012H, APS1013H, APS1015H, APS1023H, APS1033H, APS1035H, APS1036H, APS1041H, APS1061H, APS1088H.

Finance and Management

AER1601H, APS500H1, APS502H1, APS1001H, APS1004H, APS1009H, APS1016H, APS1017H, APS1020H, APS1022H, APS1028H, APS1032H, APS1043H, APS1049H, APS1050H, APS1051H, APS1052H.

Engineering and Society

APS510H1, APS1018H, APS1024H, APS1025H, APS1031H, APS1034H, APS1090H, APS1101H, APS1420H.

Identity, Privacy and Security

Participating Programs:

- Electrical and Computer Engineering MEng

MEng students must successfully complete **four half courses (2.0 full-course equivalents [FCEs])** as follows:

- JIE1001H/ECE1518H *Seminar in Identity, Privacy, and Security*
- Two courses (1.0 FCE) from:
  - ECE568H1, ECE1517H, ECE1529H, ECE1776H, ECE1778H
- And one course (0.5 FCE) from:
  - INF2124H, INF2181H, INF2241H.

Photonics

Participating Programs:

- Electrical and Computer Engineering MEng

MEng students must successfully complete **at least four courses** from those listed below. Students may double-count one course at most towards any ECE emphasis.

- Any ECE14XXH course
- ECE2500Y *Master of Engineering Project* (topic in photonics; counts as one course towards the emphasis).

Robotics

Participating Programs:

- Aerospace Science and Engineering MEng
- Electrical and Computer Engineering MEng
- Mechanical and Industrial Engineering MEng

Students must successfully complete **four courses (2.0 full-course equivalents [FCEs])** chosen from at least two of the following groups, and no more than two in any given group:

Group 1: Planning and Control

AER1516H, AER1517H,
ECE557H1, ECE1635H, ECE1636H, ECE1647H, ECE1653H, ECE1657H,
MIE1064H.

Group 2: Perception and Learning

AER1513H, AER1515H,
CSC2503H, CSC2506H, CSC2515H, CSC2541H, CSC2548H,
ECE516H1, ECE1511H, ECE1512H,
JEB1433H,
ROB501H1.

Group 3: Modelling and Dynamics

AER506H1, AER1503H, AER1512H,
JEB1444H,
MIE1001H, MIE1005H.

Group 4: Systems Design and Integration

AER525H1, AER1216H, AER1217H,
CSC2621H,
ECE470H1,
MIE505H1, MIE506H1, MIE1070H, MIE1075H, MIE1076H, MIE1080H, MIE1809H,
ROB521H1, ROB1514H.

Sustainable Energy

Participating Programs:

- Aerospace Science and Engineering MASc
- Aerospace Science and Engineering MEng
- Aerospace Science and Engineering PhD
- Chemical Engineering and Applied Chemistry MASc
- Chemical Engineering and Applied Chemistry MEng
- Chemical Engineering and Applied Chemistry PhD
- Civil Engineering MASc
- Civil Engineering MEng
- Civil Engineering PhD
- Electrical and Computer Engineering MASc
- Electrical and Computer Engineering MEng
- Electrical and Computer Engineering PhD
- Mechanical and Industrial Engineering MASc
- Mechanical and Industrial Engineering MEng
- Mechanical and Industrial Engineering PhD
- Materials Science and Engineering MASc
- Materials Science and Engineering MEng
- Materials Science and Engineering PhD

MASc and PhD students must successfully complete:

- At least **three half courses (1.5 full-course equivalents [FCEs])** from either of the following lists below.
- A thesis towards their degree on a topic related to sustainable energy. Topics must be approved by the steering committee of the Institute of Sustainable Energy. Contact: emphasis@cpe.utoronto.ca.

MEng students must successfully complete:

- **Four half courses (2.0 FCEs)** from either of the following lists below, including at least one core course (0.5 FCE).

Core Courses

APS1032H *Introduction to Energy Project Management*,
MIE515H1 *Alternative Energy Systems*,
MIE1120H *Current Energy Infrastructure and Resources*.

Elective Courses

AER507H1, AER1304H, AER1315H, AER1415H,
CHE568H1, CHE1053H, CHE1118H, CHE1123H, CHE1142H, CHE1143H,
CIV575H1, CIV576H1, CIV577H1, CIV1303H, CIV1307H,
ECE1030H, ECE1055H, ECE1057H, ECE1059H, ECE1085H, ECE1086H, ECE1092H, ECE1094H, ECE1476H,
MIE516H1, MIE517H1, MIE1128H, MIE1129H, MIE1130H, MIE1132H, MIE1240H, MIE1241H, MIE1715H,
MSE1023H, MSE1028H, MSE1058H.

Contact

All students are asked to register with Climate Positive Energy (CPE) at emphasis@cpe.utoronto.ca, at the beginning of their studies, to receive information about energy-related activities and opportunities on campus. CPE also administers a number of awards and scholarships for which students may be eligible.

Systems Control

Participating Programs:

- Electrical and Computer Engineering MEng

MEng students must successfully complete **at least four courses** from those listed below. Students may double-count one course at most towards any ECE emphasis.

- ECE557H1 *Linear Control Theory*
- Any ECE16XXH course
- ECE2500Y *Master of Engineering Project* (topic in systems control; counts as one course towards the emphasis).

Electrical and Computer Engineering: Electrical and Computer Engineering MASc, MEng, PhD Courses

The following groups of courses in the more distinct fields of graduate study in electrical and computer engineering are presented for student guidance in selecting courses. Suitable courses offered by other departments may be selected subject to the approval of the Department of Electrical and Computer Engineering. Students registered in a graduate degree program which involves research are required to complete the seminar course JDE1000H *Ethics in Research* during their first year of registration. The department should be consulted each session as to course offerings.

Biomedical Engineering

Course Code	Course Title
HAD5751H	AI Development and Implementation in Health Care
JEB1433H	Medical Imaging
JEB1444H	Neural Engineering
JEB1447H	Sensory Communications
MIE1052H	Signal Processing for Bioengineering

Communications

Course Code	Course Title
ECE537H1	Random Processes
ECE1501H	Error Control Codes
ECE1502H	Information Theory
ECE1503H	Graphs, Error-Correction Coding, and Inference
ECE1504H	Statistical Learning
ECE1505H	Convex Optimization
ECE1508H	Special Topics in Communications
ECE1511H	Signal Processing
ECE1512H	Digital Image Processing and Applications
ECE1513H	Introduction to Machine Learning
ECE1517H	Biometric Systems
ECE1518H	Seminar in Identity, Privacy, and Security
ECE1521H	Detection and Estimation Theory
ECE1522H	Data Communications II
ECE1524H	Service Provider Networks
ECE1529H	Adaptive Systems for Signal Processing and Communications
ECE1541H	Communication Networks I
ECE1542H	Communication Networks II
ECE1543H	Mobile Communications Systems
ECE1545H	Bridges and Routers Planning
ECE1548H	Advanced Network Architectures
ECE1549H	Stochastic Networks
ECE1551H	Mobile Broadband Radio Access Network
ECE1552H	Modern Mobile Air Interfaces

Computer Engineering

Course Code	Course Title
ECE516H1	Intelligent Image Processing
ECE532H1	Digital Systems Design
ECE1718H	Special Topics in Computer Hardware Design
ECE1754H	Compilation Techniques for Parallel Processors
ECE1755H	Parallel Computer Architecture and Programming
ECE1756H	Reconfigurable Computing and FPGA Architecture
ECE1762H	Algorithms and Data Structures
ECE1767H	Design for Test and Testability
ECE1769H	Behavioural Synthesis of Digital Integrated Circuits
ECE1770H	Trends in Middleware Systems — Selected Topics and Concepts
ECE1771H	Quality of Service
ECE1774H	Sensory Cybernetics
ECE1776H	Computer Security, Cryptography, and Privacy
ECE1777H	Computer Methods for Circuit Simulation
ECE1778H	Creative Applications for Mobile Devices
ECE1779H	Introduction to Cloud Computing
ECE1780H	Advanced Mobile User Interfaces
ECE1781H	Dependable Software Systems
ECE1782H	Programming Massively Parallel Multiprocessors and Heterogeneous Systems

Course Code	Course Title
ECE1783H	Design Tradeoffs in Digital Systems
ECE1784H	Trustworthy Machine Learning
ECE1785H	Empirical Software Engineering
ECE1786H	Creative Applications of Natural Language Processing

Electromagnetics

Course Code	Course Title
ECE1228H	Electromagnetic Theory
ECE1229H	Advanced Antenna Theory
ECE1243H	Topics in Electromagnetic Waves
ECE1252H	Introduction to Computational Electrodynamics
ECE1254H	Modeling of Multiphysics Systems
ECE1256H	Microwave Circuits
ECE1257H	Integral Equation Methods for Computational Electromagnetism

Electronics

Course Code	Course Title
ECE1334H	Selected Topics in Solid State Electronics/VLSI Technology
ECE1336H	Semiconductor Physics
ECE1352H	Analog Circuit Design I
ECE1360H	Selected Topics in Instrumentation
ECE1365H	High Frequency Integrated Circuits
ECE1371H	Advanced Topics in Analog Circuits
ECE1373H	Digital Design for Systems-on-Chip
ECE1379H	Introduction to Compound Semiconductor Devices
ECE1387H	CAD for Digital Circuit Synthesis and Layout
ECE1388H	VLSI Design Methodology
ECE1390H	Selected Topics in Circuits and Systems
ECE1391H	Advanced Microelectronic Devices
ECE1392H	Integrated Circuits for Digital Communications
ECE1393H	Semiconductor Devices
ECE1394H	Technical Management of Modern IC Design
ECE1395H	Power Semiconductor Devices and Applications
ECE1396H	Analog Signal Processing Circuits
ECE1398H	VLSI Technology

Energy Systems

Course Code	Course Title
ECE1030H	Space Vector Theory and Control
ECE1049H	Special Topics in Energy Systems
ECE1055H	Dynamics of HVdc/ac Transmission Systems
ECE1059H	Special Topics in Energy Systems
ECE1066H	Design of High-Frequency Switch-Mode Power Supplies (SMPS)
ECE1068H	Introduction to EMC
ECE1085H	Power System Optimization
ECE1086H	Power Management for Photovoltaic Systems
ECE1092H	Smart Grid Case Studies
ECE1093H	Electrical Insulation Design and Coordination
ECE1094H	Power Systems Operations and Economics
ECE1095H	Grounding and Bonding

Photonics

Course Code	Course Title
ECE1448H	Quantum Mechanics for Engineers
ECE1450H	Ultrafast Photonics
ECE1460H	Special Topics in Photonics
ECE1461H	Advanced Laser Processing
ECE1467H	Integrated Optical Circuit Design
ECE1475H	Bio Photonics
ECE1476H	Solar Energy Capture and Storage in Natural and Engineered Systems
ECE1478H	Lasers and Detectors

Systems Control

Course Code	Course Title
ECE557H1	Linear Control Theory
ECE1635H	Special Topics in Control I
ECE1636H	Control of Discrete-Event Systems I
ECE1637H	Control of Discrete-Event Systems II
ECE1639H	Analysis and Control of Stochastic Systems I
ECE1647H	Introduction to Nonlinear Control Systems
ECE1653H	Hybrid Systems and Control Applications
ECE1656H	Nonlinear Modeling and Analysis of Biological Systems
ECE1657H	Game Theory and Evolutionary Games
ECE1658H	Geometric Nonlinear Control of Robotic Systems
ECE1659H	Robust and Optimal Control
ECE1660H	Risk-Aware and Stochastic Control Theory with Learning

Master of Engineering

Course Code	Course Title
ECE2500Y	Master of Engineering Project

Reading Course

Course Code	Course Title
ECE1001H	Readings in Cognate Subjects

APS Engineering Courses

Course Code	Course Title
APS1012H	Managing Business Innovation and Transformational Change
APS1041H	Inventrepreneurship (Invention and Entrepreneurship)
APS1043H	Writing Your Own Patent Application
APS1070H	Foundations of Data Analytics and Machine Learning
APS1081H	Quantum Machine Learning

English

English: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

English

MA (No Field)

MA (Field: Creative Writing)

PhD

Combined Degree Programs

STG, Law, JD / English, MA

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Book History and Print Culture**
  - English, MA, PhD
- **Diaspora and Transnational Studies**
  - English, MA, PhD
- **Environmental Studies**
  - English, MA, PhD
- **Jewish Studies**
  - English, MA, PhD
- **Sexual Diversity Studies**
  - English, MA, PhD
- **South Asian Studies**
  - English, MA, PhD
- **Women and Gender Studies**
  - English, MA, PhD
- **Women's Health**
  - English, MA, PhD

Overview

One of the strongest and most diverse graduate English programs in North America, the University of Toronto's graduate program in the Department of English presents a wide array of approaches to the study of literature that includes both rigorous historical scholarship and the innovations of new theoretical, cultural, and interdisciplinary methods. This rich variety is exemplified in the more than 30 graduate seminars offered every year and in the interdisciplinary conjunctions with other departments and collaborative specializations.

Contact and Address

Web: www.english.utoronto.ca
Email: deptofenglish.graduate@utoronto.ca
Telephone: (416) 978-2526
Fax: (416) 978-2836

Department of English
University of Toronto, Jackman Humanities Building
6th Floor, 170 St. George Street
Toronto, Ontario M5R 2M8 Canada

English: Graduate Faculty

Full Members

Ackerman, Alan - BA, MA, PhD
Akbari, Suzanne - BA, MA, MPH, PhD
Bewell, Alan - BA, MA, PhD
Blake, Liza - BA, MA, MPH, PhD
Bolus-Reichert, Christine - BPhil, AM, PhD
Boyagoda, Randy - PhD
Charise, Andrea - BSc, MA, PhD
Clarke, George Elliott - BA, MA, PhD
Cobb, Michael - BA, AM, MA, PhD
Cruz, Denise - BA, MA, PhD
Dancer, Thom - MA, PhD
Dickie, Simon - BA, MA, PhD
Dolan, Neal - BA, PhD
Downes, Paul - BA, PhD
DuBois, Andrew - BA, PhD
Esonwanne, Uzoma - BA, MA, PhD
Esterhammer, Angela - BA, PhD
Gallagher-Ross, Jacob - BA, MFA, DFA
Gaston, Kara Susan - BA, MPH, PhD
Gillespie, Alexandra - BA, BSc, PhD
Gniadek, Melissa - AB, MA, MA, PhD
Goldman, Marlene Beth - BFA, MA, PhD
Greene, Richard - PhD
Hammond, Adam - BA, MA, PhD
Harvey, Elizabeth - PhD
Hernandez, Alex - AB, AM, MA, PhD
Hill, Colin - BA, MA, PhD
Jaffe, Audrey - BA, PhD
Kamboureli, Smaro - BA, MA, PhD
Keymer, Thomas - BA, MA, PhD
Kortenaar, Neil ten - BA, MA, PhD
Lamb, Susan - BA, AM, DA
Larson, Katie - BMus, AB, MPH, PhD
Leonard, Garry - BA, MA, PhD
Levene, Mark - BA, MA, PhD
Li, Hao - BA, PhD
Lopez, Jeremy - BA, MA, DPhil
Magnusson, Lynne - BA, MA, PhD
Maurice, Alice - BA, DPhil
McGill, Robert - BA, MA, MPH, PhD ***(Acting Chair and Acting Graduate Chair)***
Michelet Pickavé, Fabienne L. - MPH, LèsL, LittD
Morgenstern, Naomi - BA, MA, PhD ***(Chair and Graduate Chair; on leave)***
Most, Andrea - BA, MA, PhD

Mount, Nick - AM, PhD
Percy, Carol - BA, MA, DPhil
Quayson, Ato - BA, PhD
Radovic, Stanka - PhD
Robins, William - BA, MPH, PhD
Robinson, Terry - BA, MA, PhD
Rogers, John - BA, MA, PhD
Rubright, Marjorie - AB, MA, DLitt
Salih, Sara - BA, DPhil
Schmitt, Cannon - BA, MA, PhD
Seitler, Dana - BA, MA, PhD
Sergi, Matthew - BFA, PhD
Sobecki, Sebastian - PhD
Stern, Simon - BA, JD, PhD, Chair in Electronic Commerce
Stevens, Paul - BA, MA, PhD
Suzack, Cheryl - BA, BE, MA, PhD
Switzky, Lawrence - BA, MA, PhD
Syme, Holger Schott - BA, AM, PhD
Trilling, Renee - MA, PhD
Vernon, Karina Joan - BA, MA, PhD
Warley, Christopher - BA, MA, DPhil
Weisman, Karen - BA, PhD
White, Dan - BA, MA, PhD ***(Director of Graduate Studies)***
Williams, Ian - BA, MA, PhD
Williams, Katherine - BA, MA, PhD
Wright, Daniel - BA, MA, PhD
Xie, Ming - BA, PhD

Members Emeriti

Adamowski, Thomas - PhD
Asals, Frederick - AB, MA, PhD
Auster, Henry - BA, MA, PhD
Cameron, Elspeth - BA, MA, PhD
Chambers, Douglas - PhD
Cook, Eleanor - PhD
Corman, Brian - AB, AM, PhD
Cuddy-Keane, Melba - BA, MA, PhD
Domville, Eric William - BA, PhD
Duffy, Dennis - AB, MA, PhD
Dutka, JoAnna - BA, MA, PhD, ARCT
Galbraith, David - MA, PhD
Halewood, William - AB, MA, PhD
Hayne, Barrie - BA, AM, PhD
Hutcheon, Linda - BA, MA, PhD
Johnston, Alexandra - PhD
Klausner, David - AB, PhD
Leggatt, Alexander - BA, MA, PhD
Li, Victor - BA, MA, PhD
Murray, Heather - BA, MA, PhD
Saddlemyer, Ann - PhD, DLitt
Sidnell, Michael - BA, MA, PhD
Townsend, David Robert - BA, MA, PhD
Vicari, E. Patricia - BA, MA, PhD
Visser, Colin - BA, BLitt, PhD
Warkentin, Germaine - PhD

Associate Members

Aguila-Way, Tania - BA, MA, PhD
Azubuko-Udah, Comfort - PhD
Baker, Deirdre - BA, MA, PhD
Blayney, Peter - BA, PhD
Dooley, Ann - BA, MA, PhD
Mehta, Rijuta - BA, MA, MA, PhD
Naga, Noor - BA, MA
Sharpe, Christina - PhD
Tysdal, Daniel - BA, MA
Walkden, Andrea - MPH, PhD

English: English MA

Fostering a sophisticated command of current theoretical approaches, the **Master of Arts (MA) program** provides coverage and support in a diverse range of historical, geographical, thematic, and interdisciplinary research areas.

The MA program can be taken on a full-time or part-time basis, with the exception of MA in English in the field of Creative Writing, which is taken on a full-time basis only. The MA in English in the field of Creative Writing has different requirements, which are described in a separate section below.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of English's additional admission requirements stated below.
- A minimum of 7 full-year undergraduate courses in English or the equivalent in half-year courses (i.e., 14), or any combination of full- and half-year courses that add up to the equivalent of 7 full-year courses in English.
- An appropriate bachelor's degree (i.e., a four-year undergraduate degree), or its equivalent (preferably in English), with a minimum grade point average (GPA) of B+ or better and evidence of first-class work in English. The department favours a broad training in the major genres and all periods of English literary history.
- Recommendations from two referees.
- A statement of purpose.
- A single writing sample consisting of 12 to 15 pages (inclusive of footnotes and bibliography). The writing sample should be an accomplished piece of the applicant's own academic writing, such as an advanced undergraduate seminar paper. See details about the writing sample.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English are required to write the Test of English as a Foreign Language (TOEFL). Minimum scores required are:
  - 600 on the paper-based test and 5 on the Test of Written English (TWE)
  - 100/120 on the Internet-based test, with at least 22/30 on the writing and speaking sections
- Admissions are selective; possession of minimum qualifications does not guarantee admission.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **4.0 full-course equivalents (FCEs)** as follows:
  - ENG6999Y *Critical Topographies: Theory and Practice of Contemporary Literary Studies in English*
  - 3.0 approved graduate FCEs in English
- Students must attain a minimum B standing in each graduate course.

- Students in the part-time option will take one half course to three courses per session.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 9 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

English: English MA; Field: Creative Writing

MA Program; Field: Creative Writing

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of English's additional admission requirements stated below.
- A minimum of 7 full-year undergraduate courses in English or the equivalent in half-year courses (i.e., 14), or any combination of full- and half-year courses that add up to the equivalent of 7 full-year courses in English.
- An appropriate bachelor's degree (i.e., a four-year undergraduate degree) or its equivalent (preferably in English) with a minimum grade point average (GPA) of B+ or better and evidence of first-class work in English. The department favours a broad training in the major genres and all periods of English literary history.
- Recommendations from two referees.
- A statement of purpose.
- A portfolio consisting of 20 to 25 pages of prose (drama, fiction, or creative non-fiction) and/or poetry. See details about the format of creative writing portfolio submissions.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English are required to write the Test of English as a Foreign Language (TOEFL). Minimum scores required are:
  - 600 on the paper-based test and 5 on the Test of Written English (TWE)
  - 100/120 on the Internet-based test, with at least 22/30 on the writing and speaking sections
- Admissions are selective; possession of minimum qualifications does not guarantee admission.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **3.5 full-course equivalents (FCEs)** as follows:
  - ENG6950Y *Workshop in Creative Writing*: all students must complete the Workshop in Creative Writing in Year 1 of their program
  - ENG6960H *Advanced Creative Writing Workshop*: all students must complete the Advanced Creative Writing Workshop in Year 2 of their program
  - 2.0 approved graduate FCEs in English
- Students must attain a minimum B standing in each graduate course.
- Supervised **Writing Project** (the equivalent of a thesis). In Year 2 of their program, students undertake a book-length Writing Project in a genre of their choice: poetry, drama, fiction, or creative non-fiction. Each student is assigned a faculty member or adjunct faculty member with whom to consult on a regular basis about the project. All advisors are published writers.
- The MA in English in the field of Creative Writing program cannot be taken on a part-time basis.

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW)
Time Limit: 3 years full-time

English: English PhD

Fostering a sophisticated command of current theoretical approaches, the **Doctor of Philosophy (PhD) program** provides coverage and support for research projects in a diverse range of historical, geographical, thematic, and interdisciplinary research areas.

Applicants are admitted through one of two routes: 1) a master's degree in English, 2) in exceptional cases, an appropriate bachelor's degree (direct entry).

Completion of the PhD program may take longer than the indicated program length below.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of English's additional admission requirements stated below.
- Normally, applicants have a master's degree in English from a recognized university, with an average grade equivalent to at least a University of Toronto A– in the applicant's overall program.
- Applicants must satisfy the department that they are capable of independent research in English at an advanced level.
- Recommendations from two referees.
- A writing sample of not more than 5,000 words (approximately 15 to 20 pages).
- A statement of purpose.
- A curriculum vitae (CV).
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English are required to write the Test of English as a Foreign Language (TOEFL). Minimum scores required are:
  - 600 on the paper-based test and 5 on the Test of Written English (TWE)
  - 100/120 on the Internet-based test, with at least 22/30 on the writing and speaking sections
- Admission to the PhD is based on the applicant's undergraduate and graduate records and upon the evidence of the references, writing sample, and statement.

- Admissions are selective; possession of minimum qualifications does not guarantee admission.

Completion Requirements

- Students pursue a program of study and research approved by the department.

Courses

- The **minimum coursework requirements** for the degree, a total of **3.75 full-course equivalents (FCEs)**, are as follows:
  - Year 1: ENG9400H *Essential Skills Workshop Series*. This course is required unless ENG8000H (no longer active) or equivalent course has already been taken.
  - Either Year 2 or Year 3: ENG9900H *Teaching Literature*
  - 3.0 additional graduate FCEs in English, as approved by the department
- Every student must select at least 2.0 FCEs outside the chosen research area in the course of their graduate training. The student is encouraged to combine these courses into a minor research area. Graduate courses taken as part of the master's program may be counted in this connection, but not ENG6999Y *Critical Topographies: Theory and Practice of Contemporary Literary Studies in English* nor Credit/No Credit courses in the 9000 series.
- Course selection must meet the approval of the department.

Language Requirement

- Demonstrated reading knowledge of French by May 31 of Year 3 of registration.
- With the permission of the department, another language (including Old English) may be substituted for French provided that this other language is required by the student's research area. The completion of this requirement is recorded on the transcript with the course code LRQ7777Y and the subtitle given of the language undertaken to fulfil this requirement.
- The supervisory committee may require the student to qualify in other program-related languages as well.

Special Fields Examination

- Students are required to pass a Special Fields Examination. The examination has three components:
  - A written examination, based on a reading list drawn up in consultation with the supervisory committee
  - A short position paper, in which the student articulates the argument and stakes of the proposed thesis in light of the preparation for this written examination
  - An oral examination that engages in part with the written examination and in part with the position paper
- Students generally take the Special Fields Examination no later than the end of the second session of Year 2. A second attempt of the Special Fields Examination is allowed on the recommendation of the student's committee.
- The student must have completed all requirements for the degree, exclusive of thesis research, by the end of Year 3 in order to remain in good standing in the program.

Thesis

- A candidate is required to submit a thesis on an approved subject embodying the results of original investigation which constitute a significant contribution to the knowledge of the field, and to pass an oral examination on the subject of the thesis. The normal length of a PhD thesis is approximately 75,000 words. The maximum length accepted by the department is 100,000 words.
- No later than May 15 of Year 1 of registration, the student must submit to the Associate Director, PhD, a preliminary thesis proposal, approved by the prospective supervisor. The Associate Director, PhD, appoints a supervisory committee that includes a supervisor and two other faculty members with expertise in the proposed research area. The student is required to meet with the supervisory committee within three months of submitting the preliminary proposal. An approved thesis proposal signed by all members of the supervisory committee and by the Associate Director, PhD, must be submitted by October 1 of Year 2 of registration.
- The student and the supervisor should meet regularly. The student is also required to meet at least once a year with the supervisory committee. The supervisory committee should normally approve the completed thesis before it is submitted for examination.
- The Doctoral Final Oral Examination is arranged by the department in collaboration with the School of Graduate Studies. The candidate should allow at least 10 weeks from submission of the thesis for the department to complete the arrangements for the oral examination.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of English's additional admission requirements stated below.
- In exceptional cases, applicants with an appropriate bachelor's degree from a recognized university that includes at least 8.0 full-course equivalents (FCEs) in English, with an average grade equivalent to at least a University of Toronto A– in the applicant's overall program may be considered for admission (direct entry).
- Applicants must satisfy the department that they are capable of independent research in English at an advanced level.
- Recommendations from two referees.
- A writing sample of not more than 5,000 words (approximately 15 to 20 pages).

- A statement of purpose.
- A curriculum vitae (CV).
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English are required to write the Test of English as a Foreign Language (TOEFL). Minimum scores required are:
  - 600 on the paper-based test and 5 on the Test of Written English (TWE)
  - 100/120 on the Internet-based test, with at least 22/30 on the writing and speaking sections
- Admission to the PhD is based on the applicant's undergraduate records and upon the evidence of the references, writing sample, and statement.
- Admissions are selective; possession of minimum qualifications does not guarantee admission.

Completion Requirements

- Students pursue a program of study and research approved by the department.

Courses

- The **minimum coursework requirements** for the degree, a total of **6.75 full-course equivalents (FCEs)**, are as follows:
  - Year 1: ENG6999Y *Critical Topographies: Theory and Practice of Contemporary Literary Studies in English*
  - Year 2: ENG9400H *Essential Skills Workshop Series*. This course is required unless ENG8000H (no longer active) or equivalent course has already been taken.
  - Either Year 3 or Year 4: ENG9900H *Teaching Literature*
  - 5.0 additional graduate FCEs in English, as approved by the department. The student must complete ENG6999Y plus 2.0 FCEs in Year 1 of the program, with an average of at least A–. Students must complete all remaining courses, except for ENG9900H, by the end of Year 3 of the program, with an average of at least an A– in order to maintain good academic standing and to continue in the PhD program. In order to maintain good academic standing, and to continue in the PhD program, the student must complete each course with a grade of at least B.
- Every student must select at least 2.0 FCEs outside the chosen research area in the course of their graduate training. The student is encouraged to combine these courses into a minor research area. Graduate courses taken as part of the master's program may be counted in this connection, but not ENG6999Y *Critical Topographies: Theory and Practice of Contemporary Literary Studies in English* nor Credit/No Credit courses in the 9000 series.
- Course selection must meet the approval of the department.

Language Requirement

- Demonstrated reading knowledge of French by May 31 of Year 4 of registration.
- With the permission of the department, another language (including Old English) may be substituted for French provided that this other language is required by the student's research area. The completion of this requirement is recorded on the transcript with the course code LRQ7777Y and the subtitle given of the language undertaken to fulfil this requirement.
- The supervisory committee may require the student to qualify in other program-related languages as well.

Special Fields Examination

- Students are required to pass a Special Fields Examination. The examination has three components:
  - A written examination, based on a reading list drawn up in consultation with the supervisory committee
  - A short position paper, in which the student articulates the argument and stakes of the proposed thesis in light of the preparation for this written examination
  - An oral examination that engages in part with the written examination and in part with the position paper
- Students in the direct-entry PhD program generally take the Special Fields Examination no later than the end of the second session of Year 3. A second attempt of the Special Fields Examination is allowed on the recommendation of the student's committee.
- The student must have completed all requirements for the degree, exclusive of thesis research, by the end of Year 4 in order to remain in good standing in the program.

Thesis

- A candidate is required to submit a thesis on an approved subject embodying the results of original investigation which constitute a significant contribution to the knowledge of the field, and to pass an oral examination on the subject of the thesis. The normal length of a PhD thesis is approximately 75,000 words. The maximum length accepted by the department is 100,000 words.
- No later than May 15 of Year 2 of registration, the student must submit to the Associate Director, PhD, a preliminary thesis proposal, approved by the prospective supervisor. The Associate Director, PhD, appoints a supervisory committee that includes a supervisor and two other faculty members with expertise in the proposed research area. The student is required to meet with the supervisory committee within three months of submitting the preliminary proposal. An approved thesis proposal signed by all members of the supervisory committee and by the Associate Director, PhD, must be submitted by October 1 of Year 3 of registration.
- The student and the supervisor should meet regularly. The student is also required to meet at least once a year with the supervisory committee. The supervisory committee should normally approve the completed thesis before it is submitted for examination.
- The Doctoral Final Oral Examination is arranged by the department in collaboration with the School of Graduate Studies. The candidate should allow at least 10 weeks

from submission of the thesis for the department to complete the arrangements for the oral examination.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

English: English MA, PhD Courses

The following list of possible courses is subject to revision; further information, including course descriptions and timetables, are posted on the Department of English website and may be obtained from the department before enrolment. Courses offered by the department vary considerably from year to year. Students in English are eligible to take courses in other graduate units (for example, Comparative Literature, Medieval Studies, Drama, Information, South Asian Studies, Women's Studies). From time to time, the department also offers programs of directed reading in special fields. These reading courses are normally available only to students in the PhD program. With the special approval of the Director of Graduate Studies, PhD students may substitute one such course for one (and not more than one) of the required courses.

Course Code	Course Title
ENG1001H	Old English I
ENG1002H	Introduction to Old English II: Beowulf
ENG1006H	York's Plays and Records
ENG1012H	Writing the Self in Late-Medieval England: Hoccleve and Kempe
ENG1100H	Topics in Canadian Literature
ENG1101H	Topics in Canadian Literature
ENG1102H	Topics in Canadian Literature
ENG1200H	Topics in African Canadian Literature
ENG1300H	Topics in Asian Canadian Literature
ENG1551H	The Canterbury Tales
ENG1582H	Piers Plowman
ENG2012H	Life-Writing in Early Modern England
ENG2017H	Early Modern Asexualities
ENG2100H	Topics in American Literature
ENG2200H	Topics in African American Literature
ENG2226H	Early Modern Manuscripts
ENG2300H	Topics in Asian American Literature
ENG2472H	Milton
ENG2486H	Early Modern Theater Theories
ENG2499H	Shakespeare's Tragedies
ENG2506H	Shakespeare's Theatrical (After) Lives
ENG2509H	Shakespeare and the Book
ENG3045H	The Comic Novel from Fielding to Austen
ENG3100H	Topics in Indigenous Literature
ENG3302H	Being There: Liveness and Presence ca. 1750–1830
ENG3338H	Satire and the Great Laughter Debate
ENG3707H	Literature and Censorship, 1640–1860
ENG4100H	Topics in Diasporic, Postcolonial, and Transnational Literature
ENG4101H	Topics in Diasporic, Postcolonial, and Transnational Literature
ENG4200H	Topics in Caribbean Literature in English
ENG4211H	Romanticism and Translation
ENG4224H	Early Nineteenth-Century Environmental Literature
ENG4300H	Topics in African Literature in English
ENG4400H	Topics in South Asian Literature in English
ENG4404H	Victorian Memory/Victorian Forgetting
ENG4405H	Genres of the Victorian Novel
ENG4501H	Victorian Fiction and the Fragility of the Social
ENG4662H	Romantic Memory
ENG4664H	Romantic Pastoral Revisited
ENG4750H	Empire of Steam: Romanticism, Technology, and Modernity
ENG4770H	Aesthetics and Ethics: the Late Victorians
ENG4973H	Marx and the American Renaissance
ENG5021H	Black Forms: Critical Race Theory and Diasporic Literature
ENG5042H	Justice and Form in Contemporary Canadian Ecopoetry
ENG5047H	Class, Culture, and American Realism
ENG5078H	Postcolonial Ecocriticism
ENG5080H	Assembling the Afro-Métis Syllabus
ENG5088H	Kind of Like: Difference, Similarity, Comparison
ENG5100H	Topics in Medieval Literature
ENG5101H	Topics in Medieval Literature
ENG5102H	The Problem of Elsewhere
ENG5115H	The Satanic Verses and the Public Life of Books

Course Code	Course Title
ENG5200H	Topics in Early Modern Literature
ENG5201H	Topics in Early Modern Literature
ENG5202H	Topics in Early Modern Literature
ENG5203H	Topics in Early Modern Literature
ENG5204H	Topics in Early Modern Literature
ENG5300H	Topics in Restoration and Eighteenth-Century Literature
ENG5400H	Topics in Romantic and Victorian Literature
ENG5401H	Topics in Romantic and Victorian Literature
ENG5500H	Topics in Twentieth-Century and Contemporary Literature
ENG5501H	Topics in Twentieth-Century and Contemporary Literature
ENG5502H	Topics in Twentieth-Century and Contemporary Literature
ENG5503H	Topics in Twentieth-Century and Contemporary Literature
ENG5580H	American Pastoral
ENG5712H	Cinema of Refusal: Inuit Modernity and Visual Sovereignty
ENG5802H	Global Protest Cultures
ENG5963H	James Joyce: Modernism, Modernity, Mythology
ENG6014H	Adapting Short Fiction
ENG6015H	Experimental Narrative and/as Narrative Theory
ENG6064H	The Theory of the Novel
ENG6100H	Topics in Genre and Form
ENG6171H	Writing a Journal Article
ENG6182H	Eating Well
ENG6188H	Land, Myth, and Translation in a Time of Crisis
ENG6362H	History and Structure of the English Language: Post-1500
ENG6365H	Diasporic Englishes
ENG6492H	Speaking of What's Next: Climate and Dystopia in Near Future Fiction
ENG6494H	Psychogeography and the Mapping of Literary Space
ENG6498H	Dystopian Fiction and Unsettled Space
ENG6510H	Creative Nonfiction
ENG6519H	Postcolonial Theory and the World Literature Debates
ENG6532H	Writing More-than-Human Lives
ENG6544H	Queer, Trans, and Feminist Historiographies
ENG6552H	Law and Literature
ENG6818H	Social Robots in the Cultural Imagination
ENG6820H	The Novel of Sexual Ideas
ENG6950Y	Workshop in Creative Writing
ENG6960H	Advanced Creative Writing Workshop
ENG6999Y	Critical Topographies: Theory and Practice of Contemporary Literary Studies in English
ENG7000Y	Special Reading Course
ENG7100H	Topics in Interdisciplinary Methods
ENG7101H	Topics in Interdisciplinary Methods
ENG7102H	Topics in Interdisciplinary Methods
ENG7103H	Topics in Interdisciplinary Methods
ENG7104H	Topics in Interdisciplinary Methods
ENG7105H	Topics in Interdisciplinary Methods
ENG8100H	Topics in Digital Literature
ENG9100H	Topics in Theory
ENG9101H	Topics in Theory
ENG9102H	Topics in Theory
ENG9400H	Essential Skills Workshop Series
ENG9500H	Professional Development
ENG9900H	Teaching Literature
JLE5220H	Tricksters and Confidence Men
JLE5225H	The Passage from History to Fiction

Environment

Environment: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Environment and Sustainability

MES

- Concentrations:
  - Adaptation and Resilience;
  - Global Change Science;
  - Social Sustainability;
  - The Sustainability Transition

Overview

The goal at the School of the Environment is to create and interpret knowledge on environmental issues through outstanding academic programs, and to provide students with the skills, knowledge, and experience necessary to make a substantive difference in the world. We are focused on creating new knowledge, training future leaders, engaging and forging partnerships with the wider community, and contributing to positive environmental and social change from the local to the global scale.

The School of the Environment acts as a hub for researchers and students from many different disciplines spanning the social sciences, natural sciences, and humanities, bringing together many different perspectives to bear on today's pressing environmental challenges. Faculty and instructors make up a diverse community collaborating across departments, schools, and Faculties at the University of Toronto and beyond.

Contact and Address

Web: environment.utoronto.ca/graduate/mes
Email: grad.director.env@utoronto.ca or grad.office.env@utoronto.ca
Telephone: (416) 978-5174

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University of Toronto
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Environment: Graduate Faculty

Full Members

Abbatt, Jonathan - BSc, PhD
Abizaid, Christian - MA, PhD
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Akrigg, Ben - BA, PhD
Allen, Grant - BASc, MASc, PhD
Andrews, Robert - BASc, MASc, PhD, PEng
Archontitsis, George - BSc, MSc, PhD
Barrett, Spencer - BSc, PhD
Becker, Christoph - BSc, MSc, DSc
Bender, Daniel Eric - BA, PhD
Bernstein, Steven - PhD
Boland, Alana - BA, MA, PhD
Bollmann, Jorg - DrRerNat
Brown, Laura - BSc, MSc, PhD
Bunce, Susannah - BA, MES, PhD
Caraway, Brett - BA, MA, PhD
Chan, Arthur - BS, MSc, PhD
Chen, Jing - BSc, PhD
Coleman, Simon - BA, PhD
Conway, Tenley - BS, MS, PhD
Corey, Paul - BSc, MA, PhD
Corts, Kenneth - BA, MA, PhD
Cowling, Sharon - BSc, MSc, PhD
Cunningham, Hilary - BA, MA, PhD
Cyr, Helene - BSc, MSc, PhD
Daniere, Amrita - AB, PhD
Dei, George J.S. - BA, MA, PhD
Desloges, Joseph - BES, MSc, PhD
Dewar, Genevieve - BS, MA, PhD
Diamond, Miriam - MSc, MSc, PhD
Dittrich, Maria - BES, MSc, PhD
Donmez Akyildiz, Birsen - BS, MS, PhD
Drake, Jennifer Anne Pauline - BEng, MASc, PhD, PEng
Easterbrook, Steve - BSc, PhD ***(Director)***
Edwards, Elizabeth - BEng, PhD
Ensminger, Ingo - PhD
Evans, Greg - PhD
Farber, Steven - BA, MA, PhD
Farnood, Ramin - BASc, MASc, PhD
Finkelstein, Sarah - AB, MPH, PhD
Franklin, Meredith - BSc, MSc, PhD
Gough, William - BSc, MSc, PhD
Green, Jessica - PhD, PhD
Gross, Mart - BSc, PhD
Harvey, Danny - BSc, MSc, PhD
Hatzopoulou, Marianne - BSc, MSc, PhD
He, Yuhong - PhD
Hirsh, Jacob - BSc, MA, PhD
Hoffmann, Matthew - BSc, PhD
Howard, Ken - BSc, MSc, PhD
Ibrahim, Hamed - DE
Isaac, Marney Elizabeth - BS, MES, PhD
Jackson, Donald - BSc, MSc, PhD
Jakubiec, Alstan - BArch, MArch, DPhil
Jia, Charles - BEng, MEng, PhD
Jones, Dylan - BA, SM, PhD
Kant, Shashi - BE, MA, PhD
Kepe, Thembela - MS, PhD
Kesik, Ted - BASc, MASc, DPhil
Klenk, Nicole - BS, MSc, PhD
Kotanen, Peter - BSc, MSc, PhD
Kramarz, Teresa - MSc, PhD

Krkosek, Marty - BSc, PhD, CRC
Kushner, Paul - BSc, MSc, PhD
Lee, Sherry - BMus, MMus, PhD
Lehnherr, Igor - BSc, PhD
Leos Barajas, Vianey - BSc, PhD
Mabury, Scott - BS, PhD
MacLean, Heather L. - BASc, MASc, MBA, PhD, PEng
Mahrt-Smith, Jan - BSc, PhD
Malcolm, Jay - BSc, MSc, PhD
Margolis, Liat - BFA, MLA
McCarney, Patricia - BA, MCP, PhD
McCauley, Shannon - PhD
Miall, Andrew - BSc, PhD
Miller, Eric - BASc, MASc, PhD
Miller, Fiona - BIS, MA, DPhil
Mitchell, Carl - PhD
Moore, G.W.K. - BSc, PhD
Morris, Hanna - PhD
Most, Andrea - BA, MA, PhD
Mudliar, Praneeta - MSc, PhD
Murphy, Jennifer - BCh, DChem
Murphy, M. - BA, PhD
Neville, Kate - PhD, PhD
Nxumalo, Fikile - PhD
Olive, Andrea - PhD
Peltier, W. Richard - BSc, MSc, PhD, FRSC
Peng, Hui - PhD
Pilcher, Jeffrey - BA, MA, PhD
Pilzer, Joshua David - BA, MA, PhD
Poland, Blake - BA, PhD
Prudham, Scott - BASc, BA, MA, PhD
Rajkumar-Maharaj, Tegan - PhD
Robinson, John - BA, BA, MES, MES, PhD, PhD
Rochman, Chelsea - BS, PhD
Rodd, Helen - MSc, PhD
Rollinson, Njal - BSc, MSc, PhD ***(Graduate Associate Director)***
Romero-Lankao, Patricia - BS, MSc, PhD, PhD
Sage, Rowan - PhD
Sain, Mohini - PhD
Sass-Kortsak, Andrea - BSc, MHSc, PhD
Satsuka, Shiho - BA, BA, MA, PhD
Sawchuk, Lawrence - BA, MA, PhD
Saxe, Shoshanna - MSc, PhD
Scharper, Stephen - BA, MA, PhD
Sharma, Sarah - BA, MA, PhD
Sherwood Lollar, Barbara - PhD
Simpson, Andre - BSc, PhD
Singh, Neera - BSc, MF, PhD
Smith, Sandy - BAgrSc, MSc, PhD
Soldovieri, Stefan - BA, MA, PhD
Strong, Kimberly - BSc, DPhil, FRSC
Swenson, Edward - BA, MA, PhD
Tarlo, Susan - MBBS
Teichman, Judith Ann - BA, MA, PhD
Teichroeb, Julie - BSc, MA, PhD
Thomas, Sean - BA, PhD
Tozer, Laura Molly - BSc, MA, PhD
Upshur, Ross Edward - BA, MA, MSc, MD
Vanderburg, Willem - BASc, MASc, PhD, PEng
Vieta, Marcelo A. - BA, MA, PhD
Walker, Kaley - BSc, PhD
Walks, Alan - BA, MA, PhD
Walsh, Denis - BA, BSc, MPH, PhD, PhD
Wania, Frank - MPH, PhD
Wells, Peter - BScPhm
Wilson, Kathleen - AB, AM, PhD
Windisch, Marianne Touchie - BASc, PhD
Wiseman, Clare - BES, MSc, ScD
Woods, Rebecca - BA, MA, PhD
Wunch, Debra - BSc, MSc, PhD
Yatchew, Adonis - BA, MA, PhD
Yoreh, Tanhum - PhD

Members Emeriti

Fulthorpe, Roberta - BSc, MSc, PhD
Maclaren, Virginia - BA, MRP, MSc, PhD
Regier, Henry - BA, MS, PhD

Associate Members

Appolloni, Simon - PhD
D'eon, Jessica - PhD
Green, Andrew - BA, LLB, LLM, MA, PhD, Metcalf Chair in Environmental Law
Ing, Karen - MS
Jagoe, Eva-Lynn - BA, MA, PhD
Jeffrey, Melanie - PhD, PhD
Kirigia, Kariuki - PhD
Ratto, Matt - PhD
Richter, Lauren - BA, MA, PhD
Smith, Karen Louise - BSc, MASc, MASc, PhD
Wagner, Helene - MSc, MSc, PhD

Environment: Environment and Sustainability MES

The **Master of Environment and Sustainability (MES)** is a full-time, one-year research-stream program designed for students seeking the transdisciplinary research skills needed to understand and develop solutions to the many environmental and human well-being challenges and opportunities facing us in the 21st century. The transdisciplinary perspective means research 1) that is problem focused, rather than discipline-focused, starting from problems in the world and working back to the knowledge required to address those problems; and 2) involves active engagement with non-academic partners in active processes of co-production of knowledge.

The program builds on the strengths of the School of Environment's undergraduate programs and its two interdisciplinary graduate collaborative specializations in Environmental Studies and Environment and Health. Upon graduation, MES students will have acquired a transdisciplinary perspective on environmental issues, learned to use methodologies and tools relevant to environmental protection and sustainability solutions, and will be well prepared for a variety of careers in the private and public sectors or for further studies at the doctoral level.

Master of Environment and Sustainability

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the School of the Environment's additional admission requirements stated below.

- An appropriate honours bachelor's degree that includes at least a minor in environment, sustainability, or a closely related field from a recognized university with a minimum standing equivalent to at least a University of Toronto B+ in each of the final two years of study.
- Applicants should have completed a combination of major(s) and minor(s) spanning more than one discipline or have equivalent interdisciplinary experience.
- A letter of intent.
- Resumé or CV.
- Two letters of reference.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **4.0 full-course equivalents (FCEs)** as follows. Students will undertake research leading to the preparation of a thesis.
  - 1.5 FCEs in core courses:
    - ENV1103H *Living Labs for Applied Sustainability*
    - ENV1197H *Research in Environment and Sustainability, Part 1*
    - ENV1198H *Research in Environment and Sustainability, Part 2*
  - 1.0 FCE thesis: ENV1199Y
  - 1.5 FCEs in electives, selected from one of the following concentrations: Adaptation and Resilience; Global Change Science; Social Sustainability; The Sustainability Transition. For a complete list of applicable courses, see the Environment and Sustainability MES courses section below. Students wishing to take a course outside of the elective list may make a request with the Graduate Associate Director.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

Environment: Environment and Sustainability MES Courses

Environment Courses

Course Code	Course Title
ENV1001H	Environmental Decision Making
ENV1002H	Environmental Policy
ENV1003H	Global Climate Politics and Policy
ENV1005H	Ecological Statistics
ENV1007H	The Warming Papers: The Scientific Foundation of Climate Change
ENV1008H	Worldviews and Ecology
ENV1063H	The Edible Campus
ENV1103H	Living Labs for Applied Sustainability
ENV1111H	Special Topics in Adaptation and Resilience
ENV1112H	Special Topics in Global Change Science
ENV1113H	Special Topics in Social Sustainability
ENV1114H	Special Topics in the Sustainability Transition
ENV1197H	Research in Environment and Sustainability Part 1
ENV1198H	Research in Environment and Sustainability Part 2
ENV1199Y	MES Thesis
ENV1201H	Environmental Justice in an Age of Crisis
ENV1202H	Media, Democracy, and Climate Justice
ENV1444H	Capitalist Nature
ENV1701H	Environmental Law
ENV1703H	Water Resource Management and Policy
ENV1704H	Environmental Analysis and Risk Management
ENV1707H	Climate Finance
ENV2000H	Topics in Environment
ENV2000Y	Topics in Environment
ENV2002H	Special Topics in Environment
ENV3000H	Topics in Environment and Health
ENV3000Y	Topics in Environment and Health
ENV4001H	Graduate Seminar: Environment and Health
ENV4002H	The Environment and Health of Vulnerable Populations
ENV4444H	Internship
ENY4444Y	Internship
ENV5555Y	Research Paper
JGE1425H	Livelihoods, Poverty, and Environment in the Global South
JNC2503H	Environmental Pathways
JNP1016H	Graduate Seminar in Toxicology
JNP1019H	Biomedical Toxicology
JNP1020H	Interdisciplinary Toxicology
JSE1708H	Sustainability and the Western Mind

Concentration Courses

Core Courses

2.5 full-course equivalents (FCEs):

Course Code	Course Title
ENV1103H	Living Labs for Applied Sustainability
ENV1197H	Research in Environment and Sustainability, Part 1
ENV1198H	Research in Environment and Sustainability, Part 2
ENV1199Y	MES Thesis

Elective Courses

1.5 FCEs chosen from one of the following concentrations:

Concentration 1: Adaptation and Resilience

Course Code	Course Title
CHL5413H	Public Health Sanitation
CHL5903H	Environmental Health
CHL5910H	Occupational and Environmental Hygiene I
CHL5911H	Occupational and Environmental Hygiene II
CSC2720H	Systems Thinking for Global Problems
EES1136H	Climate Change Adaptation
ENV1001H	Environmental Decision Making
ENV1111H	Special Topics in Adaptation and Resilience
ENV1703H	Water Resource Management and Policy
ENV1704H	Environmental Risk Analysis and Management
ENV4002H	The Environment and Health of Vulnerable Populations
FOR1416H	Forest Fire Danger Rating
FOR1575H	Urban Forest Conservation
JGE1425H	Livelihoods, Poverty, and Environment in the Global South
JNC2503H	Environmental Pathways
JPG1404H	Issues in Global Warming
JPG1428H	Greening the City: Urban Environmental Planning and Management
PLA1601H	Environmental Planning in a Changing Climate

Concentration 2: Global Change Science

Course Code	Course Title
ANT4065H	Specific Problems: New World
CHE1435H	Fundamentals of Aerosol Physics and Chemistry
CHL5201H	Biostatistics I
CHL5202H	Biostatistics II
CHM1401H	Transport and Fate of Chemical Species in the Environment
CHM1410H	Analytical Environmental Chemistry
CHM1420H	Environmental Chemistry of Soil
CHM1425H	Modelling the Fate of Organic Chemicals in The Environment
ENV1001H	Environmental Decision Making
ENV1005H	Ecological Statistics
ENV1007H	The Warming Papers: The Scientific Foundation of Climate Change
ENV1112H	Special Topics in Global Change Science
ESS2303H	Earth Systems Evolution
FOR3000H	Current Issues in Forest Conservation
PHY1498H	Introduction to Atmospheric Physics
PHY2502H	Climate System Dynamics
PHY2504H	Geophysical Fluid Dynamics
PHY2505H	Atmospheric Radiative Transfer and Remote Sounding
PHY2506H	Data Assimilation and Retrieval Theory

Concentration 3: Social Sustainability

Course Code	Course Title
ANT3034H	Advanced Research Seminar IV
ANT6018H	Approaches to Nature and Culture
ENV1001H	Environmental Decision Making
ENV1008H	Worldviews and Ecology
ENV1063H	The Edible Campus
ENV1113H	Special Topics in Social Sustainability
ENV1201H	Environmental Justice in an Age of Crisis
ENV1202H	Media, Democracy, and Climate Justice
ENV1444H	Capitalist Nature
ENV1701H	Environmental Law

Course Code	Course Title
ENV4001H	Graduate Seminar in Environment and Health
ENV4002H	The Environment and Health of Vulnerable Populations
GGR1411H	Nature and Justice in the Anthropocene
JGE1425H	Livelihoods, Poverty, and Environment in the Global South
JPG1426H	Natural Resources, Difference, and Conflict
JPG1428H	Greening the City: Urban Environmental Planning and Management
JPG1518H	Sustainability and Urban Communities
JSE1708H	Sustainability and the Western Mind
LHA1193H	Adult Education for Sustainability
POL2213H	Global Environmental Politics
SJE1909H	Environmental Sustainability and Social Justice I

Concentration 4: The Sustainability Transition

Course Code	Course Title
CIV1307H	Life Cycle Assessment and Sustainability of Engineering Activities
ENV1001H	Environmental Decision Making
ENV1002H	Environmental Policy
ENV1003H	Global Climate Politics and Policy
ENV1114H	Special Topics in the Sustainability Transition
ENV1444H	Capitalist Nature
ENV1707H	Climate Finance
ENV1201H	Environmental Justice in an Age of Crisis
ENV1202H	Media, Democracy, and Climate Justice
FOR1270H	Forest Biomaterial Sciences: Fundamentals, Applications, and the Next Frontier
FOR1294H	Bioenergy and Biorefinery Technology
FOR1610H	Sustainable Forest Management and Certification
GGR1407H	Energy Efficiency and Beyond
GGR1408H	Carbon-Free Energy
JPG1518H	Sustainability and Urban Communities
JSE1708H	Sustainability and the Western Mind

European and Eurasian Studies

European and Eurasian Studies: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

European and Eurasian Studies

MA

Combined Degree Programs

STG, Law, JD / European and Eurasian Studies, MA

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Ethnic, Immigration and Pluralism Studies**
  - European and Eurasian Studies, MA
- **Jewish Studies**
  - European and Eurasian Studies, MA

Overview

The **Master of Arts** program in European and Eurasian Studies (MA EES) is designed to provide a well-rounded education in European and Eurasian affairs for students who wish to pursue professional, non-academic careers in areas such as government and diplomacy, journalism, business, and teaching. The programs also enrich and broaden the base of knowledge of beginning graduate students considering any PhD-level study with a specialization in the European and Eurasian areas.

The Combined Degree Program in **Law, Juris Doctor / European and Eurasian Studies, Master of Arts** provides specialized professional training for those seeking a career in law in the changing environment of the post-communist world and the European Union. There is a need for the services of well-informed specialists who can navigate the legal pitfalls of emergent legal systems and deal with lawyers and government officials in the area. Best equipped to meet this demand are people with dual expertise in law and European and Eurasian studies.

Contact and Address

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Munk School of Global Affairs & Public Policy
University of Toronto
Room 127N, 1 Devonshire Place
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European and Eurasian Studies: Graduate Faculty

Full Members

Austin, Robert - BA, MA, PhD ***(Graduate Coordinator)***
Bergen, Doris - MA, PhD
Braun, Aurel - BA, MA, PhD
Fenner, Angelica - BA, MA, PhD
Goetschel, Willi - PhD
Hansen, Randall - BA, MPH, PhD, CRC
Koznarsky, Taras - MA, PhD
Kramer, Christina - BA, MA, PhD
Levi, Ron - BCL, LLB, LLM, SJD
Magocsi, Paul - BA, MA, MA, PhD, FRSC
Noyes, John - BA, MA, PhD
Ornston, Darius - BA, MA, PhD
Orwin, Donna - PhD
Ostapchuk, Victor - BA, PhD
Pruessen, Ronald - BA, MA, PhD
Retallack, James - BA, DPhil
Smith, Alison - AM, PhD
Soldovieri, Stefan - BA, MA, PhD
Stock, Markus - MA, PhD
Subtelny, Maria - BA, PhD
Tarnawsky, Maxim - BA, PhD
Trojanowska, Tamara - MA, PhD
Wittmann, Rebecca - AB, MA, PhD
Wrobel, Piotr Jan - MA, PhD
Zilcosky, John - BA, MA, MA, PhD

Members Emeriti

Johnson, Robert - BA, PhD
Lahusen, Thomas - MA, PhD
Perron, Paul - PhD
Solomon, Peter - BA, MA, PhD
Solomon, Susan - BA, MA, PhD
Viola, Lynne - BA, MA, PhD

Associate Members

Cohen, Paul - AM, PhD
Falk, Barbara - BA, MA, PhD
Holland, Kate - MA, PhD
Jennings, Eric - BA, MA, PhD
Kahraman, Filiz - BA, MA, PhD

Kalmar, Ivan - BA, MA, PhD
Kasekamp, Andres - PhD
Komaromi, Ann - MA, DPhil
Korteweg, Anna - BA, MA, PhD
Kotsovilis, Spyridon - PhD
Light, Matthew - BA, MA, JD, PhD
Mandusic, Zdenko - BA, MA, PhD
Manger, Mark - DrRerPol
McElroy, Brendan - DPhil
Methodieva, Milena - PhD
Nelson IV, William Max - BA, MSS, MA, PhD
Pavone, Tommaso - BA, MA, DrRerPol
Reisenbichler, Alexander - BA, MA, PhD
Sayle, Timothy - AM, MPA, PhD
Schatz, Edward - PhD ***(Director)***
Shternshis, Anna - MA, PhD
Skira, Jaroslav - PhD
Todorova, Miglena - BA, MA, PhD
Topouzova, Lilia - BA, MA, PhD
Triadafilopoulos, Triadafilos - BA, MA, PhD
Way, Lucan Alan - BA, PhD
Wilson, David - BA, MA, PhD

European and Eurasian Studies: European and Eurasian Studies MA

The **Master of Arts program** in European and Eurasian Studies (MA EES) is designed to provide a well-rounded education in European and Eurasian studies for students who wish to pursue professional, non-academic careers in areas such as government and diplomacy, journalism, business, and teaching. The programs also enrich and broaden the base of knowledge of graduate students considering any PhD-level study with a specialization in the European and Eurasian areas.

The MA in European and Eurasian Studies offers students:

- the opportunity to study at the leading research university in Canada;
- the chance to work with outstanding faculty in a wide range of disciplines with a research specialization on Europe and Eurasia;
- internships, exchanges, summer study programs, and research experience in the region;
- access to one of North America's largest research libraries;
- participation in the rich academic programs of the Centre for European and Eurasian Studies and the Munk School of Global Affairs and Public Policy including specialized graduate workshops and courses offered by visiting professors;
- a strong and vibrant learning community with individualized academic and financial support;
- leadership roles in graduate student conferences, blogs, and journals.

The program requires a minimum of two academic years of full-time graduate study. For further information about graduate programs and study grants, please contact the Graduate Coordinator.

MA Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Centre for European and Eurasian Studies additional admission requirements stated below.
- At least some of the work in the program is based on the study of original texts and presupposes a reading knowledge of a language relevant to the program. Preferably, applicants should have a minimum of one academic year of study in a relevant language and are urged to undertake additional language training in the summer preceding entry to the program.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **6.0 full-course equivalents (FCEs)** as follows:
  - 2.0 FCEs in the chosen primary discipline; for example, History or Political Science.
  - 2.0 FCEs must be drawn from any discipline(s) relating to the student's course of study other than the chosen primary discipline. Students can take courses in any department, with the approval of the instructor and Graduate Coordinator, provided that the student submits coursework related to the region.
  - ERE2001H *Gateway Proseminar in European and Eurasian Studies*, taken in Year 1 of the program.
  - ERE2000Y *Research Seminar*, the interdisciplinary core course, beginning in the second session of Year 1 and continuing into Year 2. As part of ERE2000Y, each student must write 10,000 to 12,000 words including references, based on original research.
  - At least 0.5 FCE must be earned either in an approved program-related internship or in an approved academic exchange abroad.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

European and Eurasian Studies: European and Eurasian Studies MA Courses

Not all courses are offered every year. Consult the Centre for European and Eurasian Studies and individual departments for course availability. Consult the Graduate Coordinator for course credit eligibility.

Required Courses

Course Code	Course Title
ERE2000Y	Research Seminar
ERE2001H	Gateway Proseminar in European and Eurasian Studies

Elective Courses

Course Code	Course Title
ERE1151H	European Studies
ERE1161H	Topics in European and Eurasian Studies
ERE1162H	Topics in the Caucasus
ERE1165H	International Internship
ERE1170H	Conflicts and Para-States in the European Union's Backyard
ERE1175H	One Hundred Years of Cultures of Refugees in Europe, 1920–2020
ERE1179H	Illiberalism in East-Central Europe
ERE1180H	Topics in European and Eurasian Affairs
ERE1186H	The Past As Prologue: East Central and Southeastern Europe in the Interwar Period
ERE1195H	Topics in Ukraine and Eastern Europe
ERE1197H	Reading Course
ERE1994H	The Search for Security in Europe Since 1945

Anthropology

For a full listing of courses, see the Anthropology entry in this calendar.

Course Code	Course Title
JSA5147H	Language, Nationalism, and Post-Nationalism

Comparative Literature

For a full listing of courses, see the Comparative Literature entry in this calendar.

Course Code	Course Title
COL5047H	The Two Avant-Gardes
JGC1855H	Critical Theory in Context: The German-French Connection
JHL1282H	Comparative Totalitarian Culture
JLV5134H	Theories of the Novel

Criminology and Sociolegal Studies

For a full listing of courses, see the Criminology and Sociolegal Studies entry in this calendar.

Course Code	Course Title
CRI3130H	Policing
CRI3220H	Organized Crime and Corruption

Germanic Languages and Literatures

For a full listing of courses, see the Germanic Languages and Literatures entry in this calendar.

Course Code	Course Title
GER1722H	Kafka
GER1780H	Topics in German Visual Culture
GER6000H	Reading German for Graduate Students
JGC1855H	Critical Theory in Context: The French-German Connection

History

For a full listing of courses, see the History entry in this calendar.

Course Code	Course Title
HIS1032H	Modernity and Its Visual Cultures
HIS1200H	Readings in European Intellectual History
HIS1237H	France: 1870–1968
HIS1268H	The Holocaust and World War II
HIS1272H	Topics in Twentieth-Century European History
HIS1275H	Imperial Germany, 1871–1918
HIS1281H	History of Real Socialism
HIS1287H	Polish Jews Since the Partitions of Poland
HIS1290H	Topics in Imperial Russian History
HIS1296H	Stalinism and After: Beyond Cold War History
HIS1805H	Human Rights and Empire

Course Code	Course Title
JHL1282H	Comparative Totalitarian Culture
JHP1289Y	Twentieth-Century Ukraine

Political Science

For a full listing of courses, see the Political Science entry in this calendar.

Course Code	Course Title
JRA2321H	Topics in Comparative Politics
POL2207H	Topics in International Politics III
POL2226H	Ethics and International Relations
POL2321H	Topics in Comparative Politics I
POL2326H	Democracy and Dictatorship
POL2335H	Business and Politics: Power in a Global World

Slavic Languages and Literatures

For a full listing of courses, see the Slavic Languages and Literatures entry in this calendar.

Croatian and Serbian Literatures

Course Code	Course Title
SLA1517H	Modern Serbian Bards
SLA1547H	South Slavic Folklore

Polish Literature

Course Code	Course Title
SLA1304H	Transgressions: Drama, Theatre, Performance
SLA1308H	Critical Paradigms in Polish Culture
SLA1312Y	Modernism and Postmodernism in Polish Literature

Russian Literature

Course Code	Course Title
SLA1202H	Gulag Literature
SLA1203H	The Self and Other in Russian Prose
SLA1204H	Contemporary Russian Literature
SLA1207H	The Imaginary Jew
SLA1211Y	Studies in the Russian Drama: Eighteenth to Twentieth Century
SLA1215H	Studies in Russian Literature and Criticism in the Eighteenth Century
SLA1216H	From English to Russian Literature and Back
SLA1220H	Nineteenth Century Russian Thinkers
SLA1225H	Russian Literature in the Age of Empire
SLA1226H	Dostoevsky in Literary Theory and Criticism
SLA1228H	Themes in Russian Realism
SLA1231H	Russian Modernism
SLA1238H	Chekhov
SLA1239H	Vladimir Nabokov
SLA1240H	Tolstoy
SLA1410H	Gogol
SLA1411H	Synthesis of Arts in the Late Russian Empire-Early Soviet Union

Ukrainian Literature

Course Code	Course Title
SLA1404Y	Studies in Ukrainian Poets
SLA1406Y	Studies in Ukrainian Literary Criticism
SLA1407H	Aspects of Literary Translation of Ukrainian

General Slavic

Course Code	Course Title
SLA1010H	Slavic Proseminar
SLA1039H	Kyiv-Kiev-Kijow: A City and the Text
SLA1421H	Women in East European Fiction
SLA1521H	Post-Modernity and the Mythopoetic Legacy of Mitteleuropa

Reading and Research Courses

Course Code	Course Title
ERE1997H	Reading and Research

Course Code	Course Title
ERE1998H	Reading and Research I
ERE1999H	Reading and Research II

Financial Economics

Financial Economics: Introduction

Faculty Affiliation

Arts and Science; Management

Degree Programs

Financial Economics

MFE

Overview

The **Master of Financial Economics (MFE)** program is a non-thesis degree program offered jointly by the Department of Economics and the Rotman School of Management. The 18-month MFE program provides students with a broad understanding of financial theory as well as the economic framework upon which that theory is based, both in the classroom and through practical real-world experience. Students are expected to complete a mandatory winter or summer internship to enhance their development in the program and prepare themselves for an eventual career in industry. Graduates of the program receive a professional degree called the Master of Financial Economics.

Contact and Address

Web: mfe.economics.utoronto.ca
Email: mfe@utoronto.ca
Telephone: (416) 978-2678

Master of Financial Economics Program
Department of Economics, University of Toronto
150 St. George Street
Toronto, Ontario M5S 3G7 Canada

Financial Economics: Graduate Faculty

Economics

Aivazian, Varouj - BSc, MA, PhD
Celik, Murat - PhD
Gourieroux, Christian - PhD
Hussain, Sayed - BA, PhD
Melino, Angelo - BA, PhD
Mondria, Jordi - BA, MA, PhD (***Director***)
Rempel, Mark - BA, MA, MA, PhD
Tsoy, Anton - PhD

Management

Corhay, Alexandre - BSc, MSc, PhD
Davydenko, Sergei - MSc, MA, PhD
Dyck, Alexander – BA, PhD
Golubov, Andrey - MSc, PhD
McCurdy, Thomas - BA, MA, PhD
Stapleton, Maureen - MBA
Tolias, Fotini - BCom, MBA
Wang, Kevin - BSc, MA, PhD

Financial Economics: Financial Economics MFE

Master of Financial Economics

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the program's additional admission requirements stated below.
- An appropriate bachelor's degree with at least a mid-B (75%) standing in the final year of the program.
- Successful completion of courses in calculus, intermediate microeconomics, intermediate macroeconomics, and statistics.
- Applicants who do not hold a degree from a Canadian university must submit an official Graduate Record Examination (GRE) General Test score or a Graduate Management Admission Test (GMAT) score. See the program's website for details.
- Evidence of strong communication skills, both oral and written.
- Relevant work experience and/or previous training in finance is useful but not required.
- Admission is competitive, so accepted applicants will normally have achieved a standing considerably higher than the minimum requirements.

Completion Requirements

Students must successfully complete a total of **7.5 full-course equivalents (FCEs)** as follows:

- **6.5 FCEs in coursework:**
  - ECO1010H *Mathematics and Statistics for MA and MFE Students*
  - 2.0 FCEs from the Department of Economics. These core courses are the same as those required for the MA degree in Economics plus ECO1500H *Financial Economics: Asset Pricing*.
  - 1.5 FCEs from the Rotman School of Management: RSM2306H *Options and Futures Markets*, RSM2300H *Corporate Financing*, and RSM2302H *Security Analysis and Portfolio Management*.

    - 2.5 FCEs in electives from either the Department of Economics or the Rotman School, subject to the condition that at least 1.5 out of the 2.5 elective FCEs must be taken from the Department of Economics.
- FEC1000Y, a one-session **internship**.

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: S-FWS-F)
Time Limit: 3 years full-time

Forestry

Forestry: Introduction

Faculty Affiliation

Architecture, Landscape, and Design

Degree Programs

Forest Conservation

MFC

Forestry

MScF and PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Environmental Studies**
  - Forest Conservation, MFC
  - Forestry, MScF, PhD
- **Environment and Health**
  - Forest Conservation, MFC
  - Forestry, MScF, PhD

Overview

The Graduate Department of Forestry is a unified group of interdisciplinary, diverse, dedicated, and innovative natural, engineering, and social scientists. Research areas include forest conservation science, forest ecosystem management, forest governance and policy, urban forestry, and biomass utilization for sustainable bio-based materials and chemical products.

The Graduate Department of Forestry provides unique, integrative, and applied education to future leaders in these fields. Its research drives the practices and decisions of current leaders who are tasked with successfully managing the competing demands placed on Ontario's, Canada's, and the world's forests in the context of social and environmental change.

Contact and Address

Web: academic.daniels.utoronto.ca/forestry
Forest Conservation (MFC): graduate@daniels.utoronto.ca
Forestry (MScF, PhD): research@daniels.utoronto.ca
Telephone: (416) 946-3897

Graduate Department of Forestry
John H. Daniels Faculty of Architecture, Landscape, and Design
University of Toronto
1 Spadina Crescent
Toronto, Ontario M5S 2J5 Canada

Forestry: Graduate Faculty

Full Members

Carleton, Terence - BSc, MSc, PhD
Caspersen, John - BA, PhD ***(Research Programs Coordinator)***
Chung, Daniel Haeyoung - BA, MArch, PhD
Kant, Shashi - BE, MA, PhD
Krigstin, Sally - MSc, PhD
Sain, Mohini - PhD
Siegel, Katherine - BSc, MSc, PhD
Smith, Sandy - BAgrSc, MSc, PhD
Thomas, Sean - BA, PhD ***(Associate Dean, Research)***
Wotton, Mike - BSc, PhD
Yan, Ning - BSc, PhD, PEng
Yousefpour, Rasoul - BSc, MSc, PhD

Members Emeriti

Aird, Paul - BSc, MS, PhD
Blake, Terence - DipFor, BScF, STB, MF, PhD
Bryan, Rorke - BA, PhD
Hubbes, Martin - PhD
Kenney, Andrew - BSc, MSc, PhD
Malcolm, Jay - BSc, MSc, PhD
Martell, David - BASc, MASc, PhD
Nautiyal, Jagdish - BSc, MF, PhD
Smith, C. Tattersall - BA, MS, PhD
Timmer, Victor - BScF, MScF, PhD

Associate Members

Allison, Jeremy D. - PhD
Bardekjian, Adrina Caroline - MFC
Basiliko, Nathan - PhD
Beverly, Jennifer - BES, MSc, PhD
Bourchier, Robert - BA, MSc, PhD
Couto, Laercio - PhD
Davy, Christina - BSc, MSc, PhD
Faruk, Abu Omar - PhD
Flannigan, Mike - BSc, MS, PhD
Gaudon, Justin Michael - BES, PhD
Hanewinkel, Marc - PhD
Jones, Trevor A. - BSc, MSc, PhD
Koven, Anne - PhD
Kuhlberg, Mark - MA, PhD
Laaksonen-Craig, Susanna - MSc, PhD
MacDonald, Irene Heather - BA, MA, PhD
MacQuarrie, Chris J.K. - BSc, MSc, PhD
Maynard, Alex - BA, MA, MPH, PhD
McKenney, Daniel - BSc, MSc, PhD
Moola, Faisal - BSc, MSc, PhD
Nanang, David - BSc, MScF, PhD
Nelson, Elizabeth - PhD
Nock, Charles - BSc, MSc, PhD
Nol, Erica - BS, MSc, PhD

Parisien, Marc-Andre - BSc, PhD
Pinto, Fred - BScF, MScF
Puric-Mladenovic, Danijela - PhD
Ray, Justina - BS, MS, PhD
Sastry, Cherla - BSc, MSc, PhD
Smith, Peggy - BSc, PhD
Stocks, Brian - BScF, MScF
Thiffault, Nelson - BS, PhD
Timms, Laura - BSc, MScF, PhD
Tjong, Jimi - BASc, MASc, PhD
Vanderwel, Mark C. - BSc, MScF, PhD
Wang, Sen - BA, MSc, PhD
Wilson, Edward - BScF, BScF, BMedSc
Woolford, Douglas - BSc, MMath, PhD
Wyatt, Stephen - BScF, MSc, PhD
Yemshanov, Denys - MSc, PhD

Forestry: Forest Conservation MFC

The professionally oriented **Master of Forest Conservation (MFC)** is an intensive 16-month course-based program with a strong focus on field and laboratory practical training, Canadian and international field courses, practical internships, and individual and group research. It provides a strong, coherent professional education in forest conservation to students from diverse educational backgrounds. The MFC is accredited by the Canadian Forestry Accreditation Board. Graduates are eligible to begin the process of licensure to become a Professional Forester.

The MFC program can be taken on a full-time, extended full-time, or part-time basis.

MFC Program (Full-Time Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Forestry's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with an average in each of the final two years of at least mid-B. The MFC program is intended for students with a strong undergraduate background in ecology, environmental sciences, forestry, natural sciences, biology, physical geography, geology, agricultural science, or relevant social sciences. Students from other disciplines will be considered by the department.
- Additional documentation must be submitted to the department with the completed application form, including transcripts, three references, a letter of interest in the MFC program, and a resumé. See the full instructions and forms.

Completion Requirements

- The program starts in September and requires full-time intensive involvement throughout.
- Students study full-time, taking all required courses in each given session. An FZ (fail) in any one course, or a B– grade in two field courses or in any three courses normally results in a recommendation to the School of Graduate Studies to terminate the student's registration in the degree program.
- Successful completion of **7.5 full-course equivalents (FCEs)** as follows:
  - 6.0 required FCEs in FOR courses.
  - 1.5 elective FCEs.
    - Elective course selection will include the successful completion of one field course (0.5 FCE) from either FOR3011H, FOR1585H, or, in unusual circumstances, another related field course appropriate to the program and approved by the program director.
- Expected chronology:
  - **Year 1: Fall**
    - FOR3000H *Current Issues in Forest Conservation*
    - FOR3001H *Biodiversity of Forest Organisms*
    - FOR3002H *Applied Forest Ecology and Silviculture*
    - FOR3003H *Economics of Forest Ecosystems*
    - FOR3012H *Analytical Methods in Forestry*
  - **Year 1: Spring**
    - FOR3004H *Forest Management Decision Support Systems*
    - FOR3005H *Stresses in the Forest Environment*
    - FOR3009H *Forest Conservation Biology*
    - FOR3010H *Society and Forest Conservation*
  - **Year 1: Summer**
    - FOR3007H *Internship in Forest Conservation*
    - FOR3011H *International Forest Conservation Field Camp* **or** FOR1585H *Urban Forest Conservation Field Camp* **or**, in unusual circumstances, alternate eligible field course (0.5 elective FCE)
  - **Year 2: Fall**
    - FOR3006H *Forest Conservation Management and Planning*
    - FOR3008H *Case Study Capstone in Forest Conservation*
- Students may take the remaining 1.0 elective FCE in any session of their program for a total program requirement of 7.5 FCEs.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F)
Time Limit: 3 years full-time

MFC Program (Extended Full-Time Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Forestry's additional admission requirements stated below.

- An appropriate bachelor's degree from a recognized university with an average in each of the final two years of at least mid-B. The MFC program is intended for students with a strong undergraduate background in ecology, environmental sciences, forestry, natural sciences, biology, physical geography, geology, agricultural science, or relevant social sciences. Students from other disciplines will be considered by the department.
- Additional documentation must be submitted to the department with the completed application form, including transcripts, three references, a letter of interest in the MFC program, and a resumé. See the full instructions and forms.

Completion Requirements

- Students study full-time, taking all required courses in each given session. An FZ (fail) in any one course, or a B– grade in two field courses or in any three courses normally results in a recommendation to the School of Graduate Studies to terminate the student's registration in the degree program.
- Full-time students can elect an extended full-time (EFT) option. Under this option, students are allowed an extra year to complete their studies while paying the same academic fees as regular full-time students. Students would, however, pay full-time incidental fees for each year of registration. EFT option students must complete FOR3000H, FOR3001H, and FOR3012H in their first session. The remaining MFC course requirements can be completed in any order except that FOR3007H must be taken in the final Summer session and FOR3008H must be taken in the final Fall session.
- Successful completion of **7.5 full-course equivalents (FCEs)** as follows:
  - 6.0 required FCEs in FOR courses
    - FOR3000H *Current Issues in Forest Conservation*
    - FOR3001H *Biodiversity of Forest Organisms*
    - FOR3002H *Applied Forest Ecology and Silviculture*
    - FOR3003H *Economics of Forest Ecosystems*
    - FOR3004H *Forest Management Decision Support Systems*
    - FOR3005H *Stresses in the Forest Environment*
    - FOR3006H *Forest Conservation Management and Planning*
    - FOR3007H *Internship in Forest Conservation*
    - FOR3008H *Case Study Capstone in Forest Conservation*
    - FOR3009H *Forest Conservation Biology*
    - FOR3010H *Society and Forest Conservation*
    - FOR3012H *Analytical Methods in Forestry*
  - 1.5 elective FCEs:
    - Elective course selection will include the successful completion of one field course (0.5 FCE) from either FOR3011H *International Forest Conservation Field Camp* **or** FOR1585H *Urban Forest Conservation Field Camp* **or**, in unusual circumstances, another related field course appropriate to the program and approved by the graduate coordinator.
    - Students may take the remaining 1.0 elective FCE in any session of their program.

Mode of Delivery: In person
Program Length: 7 sessions full-time (typical registration sequence: FWS-FWS-F)
Time Limit: 3 years full-time

Part-Time Option

Minimum Admission Requirements

- Students study part-time, taking all required courses in each given session. An FZ (fail) in any one course, or a B– grade in two field courses or in any three courses normally results in a recommendation to the School of Graduate Studies to terminate the student's registration in the degree program.
- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Forestry's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with an average in each of the final two years of at least mid-B. The MFC program is intended for students with a strong undergraduate background in ecology, environmental sciences, forestry, natural sciences, biology, physical geography, geology, agricultural science, or relevant social sciences. Students from other disciplines will be considered by the department.
- Additional documentation must be submitted to the department with the completed application form, including transcripts, three references, a letter of interest in the MFC program, and a resumé. See the full instructions and forms.

Completion Requirements

- Part-time students must register for FOR3001H *Biodiversity of Forest Organisms* and FOR3012H *Analytical Methods in Forestry* in the Fall session of Year 1. They must complete a minimum of 3.0 full-course equivalents (FCEs) of core courses prior to registering for FOR3011H *International Forest Conservation Field Camp*. The remaining MFC course requirements can be completed in any order except that FOR3007H must be taken in the final Summer session and FOR3008H must be taken in the final Fall session.
- Successful completion of **7.5 full-course equivalents (FCEs)** as follows:
  - 6.0 FCEs in FOR courses:
    - FOR3000H *Current Issues in Forest Conservation*
    - FOR3001H *Biodiversity of Forest Organisms*
    - FOR3002H *Applied Forest Ecology and Silviculture*
    - FOR3003H *Economics of Forest Ecosystems*
    - FOR3004H *Forest Management Decision Support Systems*
    - FOR3005H *Stresses in the Forest Environment*
    - FOR3006H *Forest Conservation Management and Planning*
    - FOR3007H *Internship in Forest Conservation*
    - FOR3008H *Case Study Capstone in Forest Conservation*

        - FOR3009H *Forest Conservation Biology*
        - FOR3010H *Society and Forest Conservation*
        - FOR3012H *Analytical Methods in Forestry*
    - 1.5 elective FCEs:
        - Elective course selection will include the successful completion of one field course (0.5 FCE) from either FOR3011H *International Forest Conservation Field Camp* **or** FOR1585H *Urban Forest Conservation Field Camp* **or**, in unusual circumstances, another related field course appropriate to the program and approved by the graduate coordinator.
        - Students may take the remaining 1.0 elective FCE in any session of their program.

Mode of Delivery: In person
Program Length: 12 sessions part-time
Time Limit: 6 years part-time

Forestry: Forestry MScF

The **Master of Science in Forestry (MScF)** is a research- and thesis-based program in areas relevant to faculty expertise and funding. These include forest conservation biology and wildlife ecology, forest biosphere science, invasive species and threats to forest health, environmental sustainability of managed forests, fire and ecosystem management, forest conservation planning, sustainable development and economics, political ecology and governance of forests, social and cultural ecology of forest ecosystems, urban forestry, and forest biomaterials science and engineering.

The department considers applicants from a variety of undergraduate backgrounds including forestry; applied science and engineering; and social, physical, and biological sciences.

MScF Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Forestry's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university, with a final-year average of at least mid-B. A minimum of B+ is required for the collaborative specialization.
- Additional documentation must be submitted to the department with a completed application form, including transcripts, three references, a letter of intent, a resumé, and a writing sample. See the full instructions and forms.

Completion Requirements

- Minimal requirements for this degree are:
    - 1.0 full-course equivalent (FCE) as follows:
        - FOR1001H *Graduate Seminar* plus
        - 0.5 FCE elective.
        - Depending on the student's background, additional or alternative coursework may be required.
    - The preparation of a research thesis of acceptable quality and its oral defence.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Forestry: Forestry PhD

The **Doctor of Philosophy (PhD)** is a research- and thesis-based program in areas relevant to faculty expertise and funding. These include forest conservation biology and wildlife ecology, forest biosphere science, invasive species and threats to forest health, environmental sustainability of managed forests, fire and ecosystem management, forest conservation planning, sustainable development and economics, political ecology and governance of forests, social and cultural ecology of forest ecosystems, urban forestry, and forest biomaterials science and engineering.

The department considers applicants from a variety of backgrounds including forestry; applied science and engineering; and social, physical, and biological sciences.

Applicants may enter the PhD program via one of three routes: 1) following completion of an appropriate master's degree; 2) transfer from the University of Toronto MScF program; or 3) direct entry following completion of an appropriate bachelor's degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Forestry's additional admission requirements stated below.
- Applicants may be admitted to the four-year PhD program via completion of an appropriate master's degree from a recognized university with at least an A- standing, in a discipline appropriate to the intended field of doctoral study and research.
- Applicants must submit additional documentation to the department with completed application form, including transcripts, three references, a letter of intent, a resumé, and a writing sample. See the full instructions and forms.

Completion Requirements

- Successful completion of **2.0 full-course equivalents (FCEs)** as follows:

    - A minimum of three elective half courses (1.5 FCEs) must be taken. Depending on the student's background and academic goals, additional or alternative coursework may be required by the student's supervisory committee, including courses outside the Graduate Department of Forestry.
    - FOR1001H *Graduate Seminar*.
- Successful completion of a qualifying appraisal examination. The examination will be oral and will ordinarily be taken prior to the completion of 24 months in the program. There are three possible outcomes: pass, decision deferred pending supplementary undertakings, or unsatisfactory. If there is more than one negative vote, the outcome will be judged unsatisfactory. Students are permitted one further attempt.
- Preparation and defence of a thesis that is an original and independent research work adding significantly to the existing body of knowledge.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- Under certain specific conditions, outstanding registered MScF students may be considered by the end of Year 1 in the MScF program for transfer to the PhD program.

Completion Requirements

- Successful completion of **2.0 full-course equivalents (FCEs)** as follows:
    - A minimum of three elective half courses (1.5 FCEs) must be taken. To meet this requirement, students can use courses completed towards meeting MScF program requirements. Depending on the student's background and academic goals, additional or alternative coursework may be required by the student's supervisory committee, including courses outside the Graduate Department of Forestry.
    - FOR1001H *Graduate Seminar*. Students require credit for FOR1001H only once.
- Successful completion of a qualifying appraisal examination. The examination will be oral and will ordinarily be taken prior to the completion of 24 months in the program. There are three possible outcomes: pass, decision deferred pending supplementary undertakings, or unsatisfactory. If there is more than one negative vote, the outcome will be judged unsatisfactory. Students are permitted one further attempt.
- Preparation and defence of a thesis that is an original and independent research work adding significantly to the existing body of knowledge.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Forestry's additional admission requirements stated below.
- In exceptional circumstances, an extraordinarily strong applicant with an appropriate bachelor's degree from a recognized university may be admitted to the PhD program via direct-entry.
- Applicants must submit additional documentation to the department with completed application form, including transcripts, three references, a letter of intent, a resumé, and a writing sample. See the full instructions and forms.

Completion Requirements

- Successful completion of **2.0 full-course equivalents (FCEs)** as follows:
    - A minimum of three elective half courses (1.5 FCEs) must be taken. Depending on the student's background and academic goals, additional or alternative coursework may be required by the student's supervisory committee, including courses outside the Graduate Department of Forestry.
    - FOR1001H *Graduate Seminar*.
- Successful completion of a qualifying appraisal examination. The examination will be oral and will ordinarily be taken prior to the completion of 24 months in the program. There are three possible outcomes: pass, decision deferred pending supplementary undertakings, or unsatisfactory. If there is more than one negative vote, the outcome will be judged unsatisfactory. Students are permitted one further attempt.
- Preparation and defence of a thesis that is an original and independent research work adding significantly to the existing body of knowledge.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Forestry: Forestry MFC, MScF, PhD Courses

The Graduate Department of Forestry offers the following courses. Students should consult the departmental website each session to confirm availability.

A maximum of one directed studies course taken with a student's supervisor can be credited towards meeting departmental degree program requirements.

Course Code	Course Title
FOR1001H	Graduate Seminar
FOR1270H	Forest Biomaterial Sciences: Fundamentals, Applications, and the Next Frontier
FOR1294H	Bioenergy and Biorefinery Technology
FOR1412H	Natural Resource Management 1
FOR1413H	Natural Resource Management 2
FOR1416H	Forest Fire Danger Rating
FOR1575H	Urban Forest Conservation
FOR1585H	Urban Forest Conservation Field Camp
FOR1610H	Sustainable Forest Management and Certification
FOR1900H	Advanced Topics in Forestry 1
FOR1901H	Advanced Topics in Forestry 2
FOR3000H	Current Issues in Forest Conservation
FOR3001H	Biodiversity of Forest Organisms
FOR3002H	Applied Forest Ecology and Silviculture
FOR3003H	Economics of Forest Ecosystems
FOR3004H	Forest Management Decision Support Systems
FOR3005H	Stresses in the Forest Environment
FOR3006H	Forest Conservation Management and Planning
FOR3007H	Internship in Forest Conservation
FOR3008H	Case Study Capstone in Forest Conservation
FOR3009H	Forest Conservation Biology
FOR3010H	Society and Forest Conservation
FOR3011H	International Forest Conservation Field Camp
FOR3012H	Analytical Methods in Forestry
FOR3013H	Urban and Community Forestry: Leadership and Professional Practice
FOR3014H	Working with Wood
FOR3016H	Vegetation and Ecosystem Health Monitoring in Southern Ontario

French Language and Literature

French Language and Literature: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

French Language and Literature

MA and PhD

- Fields:
  - French Linguistics;
  - French Literature

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Book History and Print Culture**
  - French Language and Literature, MA, PhD
- **Education, Francophonies and Diversity**
  - French Language and Literature, MA
- **Sexual Diversity Studies**
  - French Language and Literature, MA, PhD
- **Women and Gender Studies**
  - French Language and Literature, MA, PhD

Overview

The Department of French has a rich history dating back to 1853. Since 1925, when the first PhD was granted, the department has remained one of the most reputed departments of its kind in Canada. Many PhD graduates are professors of French in Canadian and foreign universities. Since 1980, the department has graduated more than 200 PhDs.

Graduate students benefit from a number of exceptional resources, including the outstanding collections at the Robarts Library (containing more than 500,000 volumes in French) and the Thomas Fisher Rare Book Library. The department participates in several collaborative specializations and has strong connections with other academic units.

Home to several research groups and projects, the department offers students vital and stimulating collaborative opportunities for research. The department also publishes its own peer-reviewed journal, *Arborescences*, with graduate student support.

Graduate students are welcome to participate in many faculty-led research groups.

The department hosts lectures presented by renowned scholars, giving students a chance to network with specialists in their field. Contemporary writers from France and Québec are frequently invited to read from their works.

Department professors with literary studies expertise specialize in every period of French literature, Québec and francophone literature, and all the major types of literary theory and methodology. In linguistics, particular strengths include first and second language acquisition, languages in contact including creole studies, and formal linguistics. Several linguistics professors have strong links and collaborative research projects with Romance and Hispanic linguists and the Department of Linguistics at U of T.

Graduate students organize workshops, a forum for sharing their work in progress, as well as an annual graduate conference. Linguistics students enjoy access to a top-notch Linguistics Laboratory that is equipped with technology for data analysis and conducting psycholinguistic experiments, a space for meeting and testing subjects, and a French Linguistics library.

The MA program provides advanced academic development in either literature or linguistics, as well as outstanding training in research and communication skills in French, preparing students for doctoral studies and careers in such fields as teaching, government administration, and communications. PhD students receive rigorous research training in either literature or linguistics, culminating in original research for their doctoral thesis. While primarily training students for academic careers at the university or community college levels, the PhD in French can also lead to employment opportunities in editorial work and professions outside academia.

Contact and Address

Web: www.french.utoronto.ca
Email: french.gradcounsellor@utoronto.ca
Telephone: (416) 926-2307
Fax: (416) 926-2328

Department of French Language and Literature
University of Toronto
50 St. Joseph Street
Toronto, Ontario M5S 1J4 Canada

French Language and Literature: Graduate Faculty

Full Members

Brousseau, Anne-Marie - PhD
Cahill, James - AB, MA, MA, PhD
Drouin, Sebastien - BA, MA, PhD
Elkabas, Charles - BA, MA, PhD
Hamlaoui, Fatima - PhD
Havercroft, Barbara - BA, MA, PhD
Kullmann, Dorothea - PhD

LeBlanc, Julie - BA, PhD
Michelucci, Pascal - BA, MA, PhD
Motsch, Andreas - PhD
Ndayiragije, Juvenal - PhD
Nikiema, Emmanuel - PhD
Paterson, Janet - BA, MA, PhD
Pirvulescu, Mihaela - MA, PhD
Riendeau, Pascal - BA, MA, PhD ***(Coordinator, Graduate Admissions and Funding)***
Steele, Jeffrey - BA, MA, PhD
Tcheuyap, Alexie - BA, MA, PhD
Theriault, Patrick - BA, MA, PhD ***(Graduate Chair)***

Members Emeriti

Bertrand-Jennings, Chantal - LèsL, PhD
Boursier, Nicole - BLitt, DesL, PhD
Falconer, A. Graham - MA, DDeL'UN
Fitch, Brian - BA, PhD
Fitting, Peter - BA, PhD
Grise, Catherine - BA, MA, PhD
Heinemann, Edward - AB, MA, PhD, PhD
Kerslake, Lawrence - PhD
Lehouck, Emile - BA, DesL
McClelland, John Alan - PhD
Perron, Paul - PhD
Sarabia, Rosa - BA, PhD
Smith, David - BA, PhD, PhD
Taylor, Robert - PhD
Tolton, Cameron - PhD
Wooldridge, Terence - BA, DDeL'UN

Associate Members

Cochelin, Isabelle - DipdESup, BA, MA, PhD
Colantoni, Laura - MA, PhD
Cuervo, M. Cristina - PhD
Friesner, M. - BA, MA, PhD
Hachimi, Atiqa - BA, MA, PhD
Kortenaar, Neil ten - BA, MA, PhD
Legge, Elizabeth M.M. - BA, BA, MA, PhD
Livak, Leonid - BA, AM, PhD
Oliveira de Lima, Suzi - PhD
Perez-Leroux, Ana Teresa - MA, PhD
Rannaud, Adrien - LèsL, MA, PhD
Schallert, Joseph - PhD
Spada, Nina - BA, MA, PhD
Tieu, Lyn - BS, MA, MA, PhD

French Language and Literature: French Language and Literature MA; Field: French Linguistics

The **Master of Arts (MA) program** is both a self-contained program and the first stage towards doctoral studies. It has two objectives:

- to allow students to develop a thorough knowledge of the discipline through a program of coursework in French linguistics and
- to develop an aptitude for research.

It is a 12-month program for full-time students; the program is available on a part-time basis.

At the beginning of their program, students meet individually with the Associate Chair, Graduate in order to determine course selection with the objective of ensuring that the student has a well-rounded program and broad knowledge of the discipline.

MA Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of French Language and Literature's additional admission requirements stated below.
- B+ average standing or better, with at least B+ in French. A B+ average does not automatically lead to admission.
- Competence in French.
- Concentration in French linguistics, with a minimum of seven full courses, or equivalent, in French. A minimum of three of the seven full courses, or equivalent, should be in the proposed area of study (i.e., linguistics).
- Admission is based upon the evidence of the supporting letters and the applicant's academic record.

Completion Requirements

- Prerequisite work, if necessary.
- **Coursework.** Students must successfully complete a total of **4.0 full-course equivalents (FCEs)** as follows:
  - FRE1103H *Séminaire de linguistique I : Phonétique et phonologie*;
  - FRE1104H *Séminaire de linguistique II : Syntaxe*;
  - FRE1141H *Séminaire de linguistique III : Linguistique expérimentale et linguistique de corpus*;
    - 2.5 FCEs from the regular graduate offerings; **or**
    - 2.0 FCEs and FRE5001H *Research Essay*, a mémoire of approximately 35 pages; **or**
    - 1.5 FCEs and FRE5000Y *Research Essay*, a 65- to 75-page mémoire.
- Students must maintain a B average in order to be recommended for the degree and must obtain a minimum of mid-B in the Research Essay if taken. Students must also obtain a minimum of mid-B for the graduate seminars in linguistics (FRE1103H, FRE1104H, and FRE1141H).
- Up to 1.0 FCE may be taken outside the department, with the permission of the Associate Chair, Graduate.
- Normally, part-time students take the graduate seminars in linguistics during Year 1.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

French Language and Literature: French Language and Literature MA; Field: French Literature

The **Master of Arts (MA) program** is both a self-contained program and the first stage towards doctoral studies. It has two objectives:

- to allow students to develop a thorough knowledge of the discipline through a program of coursework in French literary studies and
- to develop an aptitude for research.

It is a 12-month program for full-time students; the program is available on a part-time basis.

At the beginning of their course of study, students meet individually with the Associate Chair, Graduate in order to determine course selection with the objective of ensuring that the student has a well-rounded program and broad knowledge of the discipline.

MA Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of French Language and Literature's additional admission requirements stated below.
- B+ average standing or better, with at least B+ in French. A B+ average does not automatically lead to admission.
- Competence in French.
- Concentration in French literature, with a minimum of seven full courses, or equivalent, in French. A minimum of five of the seven full courses, or equivalent, should be in the proposed area of study (i.e., literature). Applicants may request that up to 2.0 full-course equivalents (FCEs) of the 5.0 FCEs in the discipline come from cognate disciplines upon the department's approval.
- Admission is based upon the evidence of the supporting letters and the applicant's academic record.

Completion Requirements

- Prerequisite work, if necessary.
- **Coursework.** Students must successfully complete a total of **4.0 full-course equivalents (FCEs)** as follows:
  - FRE1202H *Séminaire de littérature 1 : théorie*
  - FRE1203H *Séminaire de littérature 2 : période*
  - FRE1204H *Séminaire de littérature 3 : genre*
    - 2.5 FCEs from the regular graduate course offerings; **or**
    - 2.0 FCEs and FRE5001H *Research Essay*, a mémoire of approximately 35 pages; **or**
    - 1.5 FCEs and FRE5000Y *Research Essay*, a 65- to 75-page mémoire.
- Students must maintain a B average in order to be recommended for the degree and must obtain a minimum of mid-B in the Research Essay if taken. Students must also obtain a minimum of mid-B for the graduate seminars in literature (FRE1202H, FRE1203H, and FRE1204H).
- Up to 1.0 FCE may be taken outside the department, with the permission of the Associate Chair, Graduate.
- Normally, part-time students take the graduate seminars in literature during Year 1.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

French Language and Literature: French Language and Literature PhD; Field: French Linguistics

The **Doctor of Philosophy (PhD) program** is necessary preparation for a career in higher education in Canada and abroad which will include teaching and research at an advanced academic level. The PhD includes a combination of advanced seminars, field examinations, a high amount of embedded professional experience in teaching and research, and the presentation of the results of a significant contribution to the discipline in the form of an original dissertation.

The PhD program engages students in a program of study and research in the field of French Linguistics approved by the department. At the beginning of their course of study, students meet individually with the Associate Chair, Graduate in order to determine course selection with a view to ensuring that the student has a well-rounded program and, considered in conjunction with the undergraduate degree, has a broad knowledge of the discipline.

Admission to the PhD program is available via one of two routes: 1) an appropriate master's degree or 2) direct entry with an appropriate bachelor's degree with high academic standing.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of French Language and Literature's additional admission requirements stated below.
- An appropriate master's degree in French linguistics with high academic standing from a recognized university, with an average grade of at least an A– in the applicant's overall program.
- An A– average does not automatically lead to admission.

- A formal application and a sample of written work in French completed as part of the applicant's bachelor's or master's program in French linguistics as appropriate. This written work should be a copy of the MA thesis if available.
- Applicants holding a master's degree must submit a statement of purpose (maximum 500 words) in French that clearly outlines the area in which the applicant intends to pursue research in French linguistics.
- Applicants must satisfy the department that they are capable of independent research in French linguistics at an advanced level.
- Admission to all programs for post-graduate degrees is based on the evidence of the supporting letters and the applicant's academic record.

Completion Requirements

- **Coursework**. Students must successfully complete a total of **3.5 full-course equivalents (FCEs)** including:
  - FRE1103H *Séminaire de linguistique I : Phonétique et phonologie*;
  - FRE1104H *Séminaire de linguistique II : Syntaxe*; and
  - FRE1141H *Séminaire de linguistique III : Linguistique expérimentale et linguistique de corpus* (unless already completed); and
  - FRE1201H *Méthodes de recherche*.
- Students must maintain an average grade of at least an A– during Year 1 to remain in good academic standing and to continue in the PhD program. With the department's permission, students may take 1.0 FCE outside the department.
- **Constitution of thesis committee**. Students must submit a form indicating the members of their thesis committee and the provisional title of the thesis. This form must be signed by the faculty member who has agreed to direct the thesis and by the two faculty members who will serve on the student's supervisory committee. Deadline to submit: June 15 of Year 1.
- **Thesis topic**. Students must register a thesis topic with the department. The proposal must be signed by the faculty member who has agreed to direct the thesis and by the two faculty members who will serve on the student's supervisory committee. Deadline to register the topic: September 15 of Year 2.
- **Thesis proposal**. A written thesis proposal, of 15 to 20 pages plus bibliography, must be submitted one week before the date of the oral field examination in April (see below).
- **Language requirements**. Students must demonstrate a reading knowledge of Old French or of another language (excluding French or English), as approved by the department by the end of Year 1.
- **Field examination (written and oral components)**.
  - Students must pass the field examination in Year 2.
  - By November 15 of Year 2, students will submit a text of 20 to 25 pages (double-spaced) in article or thesis chapter format, which outlines the state of current research in the primary domain of the dissertation. This text will form the basis of the short article (to be submitted by March 1) and will be assessed as Pass/Fail.
  - By March 1 of Year 2, students must successfully complete a document in the format of a short article which represents a pilot study or a theoretical puzzle in the field of study driven by data gathered by the student.
  - A student may not proceed to the oral part of the field examination until the **written part** has been successfully completed. In the case of a failure, the full supervisory committee will meet with the student in order to discuss the weaknesses that caused the failure and to make specific recommendations concerning the student's program. The committee may recommend that the written part of the field examination be retaken in whole or in part within a specific period of time; it may also recommend termination of the student's program.
  - The **oral part** of the field examination is to be taken by April 30 of Year 2. It is based on a 15- to 20-page (double-spaced) "thesis proposal" accompanied by an appropriate bibliography. In the case of a failure, the supervisory committee will meet with the student to discuss the weaknesses that caused the failure and to make specific recommendations concerning the student's program. The committee may recommend that the examination be retaken within a specific period of time; it may also recommend termination of the student's program. If the recommendation is to retake the exam, the student may retake the oral part of the examination once only.
- **Meet with supervisory committee**. Between the completion of the written field examination, oral field examination, and the Doctoral Final Oral Examination on the thesis, students will meet with the supervisory committee at least once a year and more frequently if required.
- **Thesis and Doctoral Final Oral Examination** on the thesis.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of French Language and Literature's additional admission requirements stated below.
- An appropriate **bachelor's degree** with high academic standing from a recognized university that includes at least 7.0 full-course equivalents (FCEs) in French language and linguistics, with an average grade of at least an A– in the overall program. A minimum of five of the seven full courses, or equivalent, should be in the proposed area of study (i.e., linguistics). Applicants may request that up to 2.0 FCEs of the 5.0 FCEs in the discipline come from cognate disciplines upon the department's approval. Admission is limited to exceptionally qualified applicants.
- An A– average does not automatically lead to admission.

- A formal application and a sample of written work in French completed as part of the applicant's bachelor's program in French linguistics as appropriate.
- Applicants must satisfy the department that they are capable of independent research in French linguistics at an advanced level.
- Admission to all programs for post-graduate degrees is based on the evidence of the supporting letters and the applicant's academic record.

Completion Requirements

- **Coursework**. Students must successfully complete a total of **7.5 FCEs** as follows:
  - In Year 1, complete 4.0 FCEs. In Year 2, complete 3.5 FCEs. These include:
    - FRE1103H *Séminaire de linguistique I : Phonétique et phonologie*;
    - FRE1104H *Séminaire de linguistique II : Syntaxe*;
    - FRE1141H *Séminaire de linguistique III : Linguistique expérimentale et linguistique de corpus*;
    - FRE1201H *Méthodes de recherche*.
- Students must maintain an average grade of at least an A– in Year 1 and Year 2 to remain in good academic standing and to continue in the PhD program. With the department's permission, students may take up to 1.0 FCE outside the department in each of Year 1 and Year 2.
- **Constitution of thesis committee**. Students must submit a form indicating the members of their thesis committee and the provisional title of the thesis. This form must be signed by the faculty member who has agreed to direct the thesis and by the two faculty members who will serve on the student's supervisory committee. Deadline to submit: June 15 of Year 2.
- **Thesis topic**. Students must register a thesis topic with the department. The proposal must be signed by the faculty member who has agreed to direct the thesis and by the two faculty members who will serve on the student's supervisory committee. Deadline to register the topic: September 15 of Year 3.
- **Thesis proposal**. A written thesis proposal, of 15 to 20 pages plus bibliography, must be submitted one week before the date of the oral field examination in April (see below).
- **Language requirements**. Students must demonstrate a reading knowledge of Old French or of another language (excluding French or English), as approved by the department by the end of Year 2.
- **Field examination (written and oral components)**.
  - Students must pass the field examination in Year 3.
  - By November 15 of Year 3, students will submit a text of 20 to 25 pages (double-spaced) in article or thesis chapter format, which outlines the state of current research in the primary domain of the dissertation. This text will form the basis of the short article (to be submitted by March 1) and will be assessed as Pass/Fail.
  - By March 1 of Year 3, students must successfully complete a document in the format of a short article which represents a pilot study or a theoretical puzzle in the field of study driven by data gathered by the student.
  - A student may not proceed to the oral part of the field examination until the **written part** has been successfully completed. In the case of a failure, the supervisory committee will meet with the student in order to discuss the weaknesses that caused the failure and to make specific recommendations concerning the student's program. The committee may recommend that the written part of the field examination be retaken in whole or in part within a specific period of time; it may also recommend termination of the student's program.
  - The **oral part** of the field examination is to be taken by April 30 of Year 3. It is based on a 15- to 20-page (double-spaced) "thesis proposal" accompanied by an appropriate bibliography. In the case of a failure, the supervisory committee will meet with the student to discuss the weaknesses that caused the failure and to make specific recommendations concerning the student's program. The committee may recommend that the examination be retaken within a specific period of time; it may also recommend termination of the student's program. If the recommendation is to retake the exam, the student may retake the oral part of the examination once only.
- **Meet with supervisory committee**. Between the completion of the written field examination, oral field examination, and the Doctoral Final Oral Examination on the thesis, students will meet with the supervisory committee at least once a year and more frequently if required.
- **Thesis and Doctoral Final Oral Examination** on the thesis.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

French Language and Literature: French Language and Literature PhD; Field: French Literature

The **Doctor of Philosophy (PhD) program** is necessary preparation for a career in higher education in Canada and abroad which will include teaching and research at an advanced academic level. The PhD includes a combination of advanced seminars, field examinations, a high amount of embedded professional experience in teaching and research, and the presentation of the results of a significant contribution to the discipline in the form of an original dissertation.

The PhD program engages students in a program of study and research in French literature approved by the department. At the beginning of their program, students meet individually with the Associate Chair, Graduate in order to determine course selection with the objective of ensuring that the student has a well-rounded program and broad knowledge of the discipline.

Admission to the PhD program is available via one of two routes: 1) an appropriate master's degree or 2) direct entry with an appropriate bachelor's degree with high academic standing.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of French Language and Literature's additional admission requirements stated below.
- An appropriate master's degree in French literature with high academic standing from a recognized university, with an average grade of at least an A– in the applicant's overall program.
- An A– average does not automatically lead to admission.
- A formal application and a sample of written work in French completed as part of the applicant's bachelor's or master's program in French literature as appropriate. This written work should be a copy of the MA thesis if available.
- Applicants holding a master's degree must submit a statement of purpose (maximum 500 words) in French that clearly outlines the area in which the applicant intends to pursue research in French literature.
- Applicants must satisfy the department that they are capable of independent research in French literature at an advanced level.
- Admission to all programs for post-graduate degrees is based on the evidence of the supporting letters and the applicant's academic record.

Completion Requirements

- **Coursework**. Students must successfully complete a total of **3.5 full-course equivalents (FCEs)** including:
  - FRE1202H *Séminaire de littérature 1 : théorie*;
  - FRE1203H *Séminaire de littérature 2 : période*;
  - FRE1204H *Séminaire de littérature 3 : genre* (unless these courses or their equivalents have already been completed); and
  - FRE1201H *Méthodes de recherche*.
- Students must maintain an average grade of at least an A– during Year 1 to remain in good academic standing and to continue in the PhD program. With the department's permission, students may take 1.0 FCE outside the department.
- **Constitution of thesis committee**. Students must submit a form indicating the members of their thesis committee and the provisional title of the thesis. This form must be signed by the faculty member who has agreed to direct the thesis and by the two faculty members who will serve on the student's supervisory committee. Deadline to submit: June 15 of Year 1.
- **Thesis topic**. Students must register a thesis topic with the department. The proposal must be signed by the faculty member who has agreed to direct the thesis and by the two faculty members who will serve on the student's supervisory committee. Deadline to register the topic: September 15 of Year 2.
- **Thesis proposal**. A written thesis proposal, of 15 to 20 pages plus bibliography, must be submitted one week before the date of the oral field examination in April (see below).
- **Language requirements**. Students must demonstrate a reading knowledge of Old French or of another language (excluding French or English), as approved by the department by the end of Year 1.
- **Field examination (written and oral components)**.
  - Students must pass the field examination in Year 2.
  - By November 15 of Year 2, students will produce a written document of approximately 10 to 15 pages (double-spaced) outlining the major area — the literary corpus, the methodological and theoretical perspectives and approaches — from which the thesis will be derived, together with a thematically organized bibliography indicating the primary and secondary works relevant to this area that the student is expected to know in detail. The "outline of the major area" will form the basis for the written part of the field examination (to be submitted by March 1) and will be assessed as Pass/Fail.
  - By March 1 of Year 2, students must successfully complete a take-home examination designed to test the student's knowledge of the general area of their research; the examination questions are given to students a week ahead of the examination.
  - A student may not proceed to the oral part of the field examination until the **written part** has been successfully completed. In the case of a failure, the full supervisory committee will meet with the student in order to discuss the weaknesses that caused the failure and to make specific recommendations concerning the student's program. The committee may recommend that the written part of the field examination be retaken in whole or in part within a specific period of time; it may also recommend termination of the student's program.
  - The **oral part** of the field examination is to be taken by April 30 of Year 2. It is based on a 15- to 20-page (double-spaced) "thesis proposal" accompanied by an appropriate bibliography. In the case of a failure, the supervisory committee will meet with the student to discuss the weaknesses that caused the failure and to make specific recommendations concerning the student's program. The committee may recommend that the examination be retaken within a specific period of time; it may also recommend termination of the student's program. If the recommendation is to retake the exam, the student may retake the oral part of the examination once only.
- **Meet with supervisory committee**. Between the completion of the written field examination, oral field examination, and the Doctoral Final Oral Examination on the thesis, students will meet with the supervisory committee at least once a year and more frequently if required.
- **Thesis and Doctoral Final Oral Examination** on the thesis.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of French Language and Literature's additional admission requirements stated below.
- An appropriate **bachelor's degree** with high academic standing from a recognized university that includes at least 7.0 full-course equivalents (FCEs) in French language and literature, with an average grade of at least an A– in the overall program. A minimum of five of the seven full courses, or equivalent, should be in the proposed area of study (i.e., literature). Applicants may request that up to 2.0 FCEs of the 5.0 FCEs in the discipline come from cognate disciplines upon the department's approval. Admission is limited to exceptionally qualified applicants.
- An A– average does not automatically lead to admission.
- A formal application and a sample of written work in French completed as part of the applicant's bachelor's program in French literature as appropriate.
- Applicants must satisfy the department that they are capable of independent research in French literature at an advanced level.
- Admission to all programs for post-graduate degrees is based on the evidence of the supporting letters and the applicant's academic record.

Completion Requirements

- **Coursework**. Students must successfully complete a total of 7.5 FCEs as follows:
  - In Year 1, complete 4.0 FCEs. In Year 2, complete 3.5 FCEs. These include:
    - FRE1202H *Séminaire de littérature 1 : théorie*;
    - FRE1203H *Séminaire de littérature 2 : période*;
    - FRE1204H *Séminaire de littérature 3 : genre*; and
    - FRE1201H *Méthodes de recherche*.
- Students must maintain an average grade of at least an A– in Year 1 and Year 2 to remain in good academic standing and to continue in the PhD program. With the department's permission, students may take up to 1.0 FCE outside the department in each of Year 1 and Year 2
- **Constitution of thesis committee**. Students must submit a form indicating the members of their thesis committee and the provisional title of the thesis. This form must be signed by the faculty member who has agreed to direct the thesis and by the two faculty members who will serve on the student's supervisory committee. Deadline to submit: June 15 of Year 2.
- **Thesis topic**. Students must register a thesis topic with the department. The proposal must be signed by the faculty member who has agreed to direct the thesis and by the two faculty members who will serve on the student's supervisory committee. Deadline to register the topic: September 15 of Year 3.
- **Thesis proposal**. A written thesis proposal, of 15 to 20 pages plus bibliography, must be submitted one week before the date of the oral field examination in April (see below).
- **Language requirements**. Students must demonstrate a reading knowledge of Old French or of another language (excluding French or English), as approved by the department by the end of Year 2.
- **Field examination (written and oral components)**.
  - Students must pass the field examination in Year 3.
  - By November 15 of Year 3, students will produce a written document of approximately 10 to 15 pages (double-spaced) outlining the major area — the literary corpus, the methodological and theoretical perspectives and approaches — from which the thesis will be derived, together with a thematically organized bibliography indicating the primary and secondary works relevant to this area that the student is expected to know in detail. The "outline of the major area" will form the basis for the written part of the field examination (to be submitted by March 1) and will be assessed as Pass/Fail.
  - By March 1 of Year 3, students must successfully complete a take-home examination designed to test the student's knowledge of the general area of their research; the examination questions are given to students a week ahead of the examination.
  - A student may not proceed to the oral part of the field examination until the **written part** has been successfully completed. In the case of a failure, the full supervisory committee will meet with the student in order to discuss the weaknesses that caused the failure and to make specific recommendations concerning the student's program. The committee may recommend that the written part of the field examination be retaken in whole or in part within a specific period of time; it may also recommend termination of the student's program.
  - The **oral part** of the field examination is to be taken by April 30 of Year 3. It is based on a 15- to 20-page (double-spaced) "thesis proposal" accompanied by an appropriate bibliography. In the case of a failure, the supervisory committee will meet with the student to discuss the weaknesses that caused the failure and to make specific recommendations concerning the student's program. The committee may recommend that the examination be retaken within a specific period of time; it may also recommend termination of the student's program. If the recommendation is to retake the exam, the student may retake the oral part of the examination once only.
- **Meet with supervisory committee**. Between the completion of the written field examination, oral field examination, and the Doctoral Final Oral Examination on the thesis, students will meet with the supervisory committee at least once a year and more frequently if required.
- **Thesis and Doctoral Final Oral Examination** on the thesis.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

French Language and Literature: French Language and Literature MA, PhD Courses

Not all courses are offered every year. Please consult the department regarding course availability.

Core Courses

Linguistics Courses

Course Code	Course Title
FRE1103H	Linguistics Seminar I: Phonetics and Phonology / Séminaire de linguistique I : Phonétique et phonologie
FRE1104H	Linguistics Seminar II: Syntax / Séminaire de linguistique II : Syntaxe
FRE1141H	Linguistics Seminar III: Experimental and Corpus Linguistics for the Study of French / Séminaire de linguistique III : Linguistique expérimentale et linguistique de corpus

Literature Courses

Course Code	Course Title
FRE1202H	Literature Seminar I: Literary Theory
FRE1203H	Literature Seminar II: Literary Periods
FRE1204H	Literature Seminar III: Literary Genres

Linguistic and Literature Courses

Course Code	Course Title
FRE1201H	Research Methodology in Literature and Linguistics / Méthodes de recherche

Elective Courses

Not all courses are offered every year. Please consult the department regarding course availability.

Linguistics Courses

Course Code	Course Title
FRE1075H	Topics in Theoretical French Linguistics
FRE1076H	Topics in Methodological Approaches to French Linguistics
FRE1132H	Phonological Problems: Creoles with a French Lexical Basis / Problèmes de phonologie : les créoles à base lexicale française
FRE1136H	Arguments, Structures, and Representations in French / Arguments, structures et représentations en français
FRE1138H	Bilingual Language Acquisition / Bilinguisme et acquisition du langage
FRE1141H	Linguistics Seminar III: Experimental and Corpus Linguistics for the Study of French
FRE1147H	Questions and Answers: Syntactic, Phonological, and Discursive Aspects
FRE1148H	Postverbal Subjects in French (and Beyond) / Les sujets postverbaux en français (et au-delà)
FRE1164H	Medieval French Language / Initiation au français médiéval

Literature Courses

Course Code	Course Title
FRE1050H	Topics in Arts and Literature in the French-Speaking World
FRE1051H	Topics in French and Francophone Literatures
FRE1312H	Emancipation and Erudition: Christine de Pisan / Émancipation et érudition : Christine de Pisan
FRE1815H	Théorie de l'histoire
FRE1905H	Baudelaire and Symbolist Modernity (1850-1900) / Baudelaire et la modernité symboliste (1850–1900)
FRE2004H	Forms and Narrative Pathways of the Extreme Contemporary Novel / Formes et voies romanesques de l'extrême contemporain
FRE2007H	Literature and Ethics: New Texts, New Perspectives / Littérature et éthique : nouveaux textes, nouvelles problématiques
FRE2011H	Writing Atheism: Literary and Philosophical Perspectives / Écrire l'athéisme : perspectives littéraires et philosophiques
FRE2035H	About the Intimate in France: Contemporary Women Writers / Autour de l'intime en France: les écrits contemporains des femmes

Course Code	Course Title
FRE2036H	Configurations of Sexual Gender in Contemporary Prose by Women Writers / Configurations du genre sexuel dans la prose contemporaine des femmes
FRE2039H	The Novel and Social Criticism in the 20th and 21st Centuries / Roman et critique sociale aux XXe et XXIe siècles
FRE2099H	Novel and Document in the Extreme Contemporary / Roman et document dans l'extrême contemporain
FRE2100H	From Text to Image: Photographs and Cinematic Adaptations in Various Contemporary Texts / Du texte à l'image : photographies, adaptations cinematographiques, illustrations et peintures dans quelques textes contemporains
FRE2102H	Indigenous Cultural Productions Made in French / Enjeux des productions culturelles autochtones de langue française au Canada
FRE2105H	Writing One's Self: From Textual Representation to Visual Representation of the Living Subject / Écritures du moi : de la représentation textuelle à la représentation visuelle du sujet écrivant
FRE2109H	History of Cultural and Literary Practices of Women in Quebec (1830-1960) / Histoire des pratiques littéraires et culturelles des femmes au Québec (1830–1960)
FRE2123H	Traversing the Social Frontier: The Figure of the Transclass in Literature (19th-21st Centuries) / Passer la frontière sociale : la figure du transclasse dans la littérature (XIXe–XXIe siècles)
FRE2202H	Literature and the Press in Quebec (20th-21st Centuries) / Littérature et presse au Québec (XXe–XXIe siècles)

Other Courses

Course Code	Course Title
FRE4001H	Reading Course
FRE5000Y	Research Essay
FRE5001H	Research Essay
FSL6000H	Reading French Course for Graduate Students

Joint Courses

Course Code	Course Title
JFC1813H	Littérature de contact et pensée anthropologique en France du XVIe au XVIIIe siècle / Literature of Contact and Anthropological Thought, 16th–18th Century
JFC5025H	Feminism and Postmodernism: Theory and Practice
JFC5105H	Collections of Knowledge: Encyclopedism and Travel Literature in Early Modern Europe (1500–1800)
JFC5120H	The Gift / Le don
JFC5129H	Performative Autobiographical Acts: Painted and Photographic Representations of Self in Personal and Political Testimonials
JFC5136H	Allegory and Allegorism in Literature and Fine Arts
JFF1101H	The Art of Exploration: How to Think the World
JFF1102H	Animages/Animots/Animotions
JFL1107H	Computational Methods for Linguists
JFL1207H	Advanced Computational Methods for Linguists
JRL1101H	Topics in Romance Laboratory Phonetics and Phonology I: Theory
JRL1111H	Second Language Acquisition of Romance Phonology

Cross-Listed Courses

Book History and Print Culture

Course Code	Course Title
BKS1001H	Introduction to Book History
BKS1002H	Book History in Practice
BKS2000H	Advanced Seminar in Book History and Print Culture

Medieval Studies

Course Code	Course Title
MST3232H	Vernacular Literature in Medieval Europe: Status and Function
MST3154H	Book History and Print Culture
MST3155H	Middle French Literature

Sexual Diversity Studies

Course Code	Course Title
SDS1000H	Theoretical and Methodological Issues in Sexual Diversity Studies

Geography and Planning

Geography and Planning: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Geography

MA, MSc, and PhD

- Fields:
  - Environmental Geography and Resource Management;
  - Historical/Social/Cultural Geography;
  - Physical Geography and Natural Systems;
  - Spatial Information Systems;
  - Urban/Economic Geography.

Planning

MScPl

- Concentrations:
  - Economic Development Planning;
  - Environmental Planning;
  - Social Planning and Policy;
  - Transportation Planning and Infrastructure;
  - Urban Design and Spatial Planning.

PhD

- Fields:
  - Cities in Global Context: Economic Development and Social Planning;
  - Environmental and Sustainability Planning;
  - Urban Development, Design and the Built Environment.

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Community Development** (admissions have been administratively suspended)
  - Geography, MA
  - Planning, MScPl
- **Contemporary East and Southeast Asian Studies**
  - Geography, MA
  - Planning, MScPl
- **Development Policy and Power**
  - Geography, MA
- **Diaspora and Transnational Studies**
  - Geography, MA, MSc, PhD
- **Environmental Studies**
  - Geography, MA, MSc, PhD
  - Planning, MScPl, PhD
- **Environment and Health**
  - Geography, MA, MSc, PhD
  - Planning, MScPl, PhD
- **Ethnic, Immigration and Pluralism Studies**
  - Geography, MA, PhD
- **Food Studies**
  - Geography, MA, MSc, PhD
- **Global Health (U of T Global Scholar)**
  - Geography, MA, MSc, PhD
  - Planning, MScPl, PhD
- **Jewish Studies**
  - Geography, PhD
- **Sexual Diversity Studies**
  - Geography, MA, PhD
- **South Asian Studies**
  - Geography, MA, PhD
- **Women and Gender Studies**
  - Geography, MA, MSc, PhD
  - Planning, MScPl, PhD

Overview

The Department of Geography and Planning offers facilities for research leading to the degrees of **Master of Arts** (MA), **Master of Science** (MSc), **Master of Science in Planning** (MScPl), and **Doctor of Philosophy** (PhD) in either Geography or Planning. The PhD program prepares students for academic careers in teaching and research. Some may also pursue an advanced career in the public or non-profit sectors, given the rising demand outside of academia for people with a PhD credential.

In Geography, faculty conduct research in the following areas: geomorphology, climatology, hydrology, biogeography, pedology, environmental assessment and sustainable natural resource management, international development, industrial innovation, urban and economic geography, cultural and historical geography, gender studies, social geography, regional analysis, the history and philosophy of geography, remote sensing, computer cartography, spatial statistics, topics in land/geographic information systems, and quantitative analysis. The territories of special concern are Canada, the United States, Latin America, the Caribbean, Northwestern and Central Europe, East Asia, South Asia, and the former Soviet Union.

In Planning, faculty work involves social, economic, cultural, and other vital considerations. In spatial scale, it ranges from the design of individual communities to policy planning at the national level to international development. Planning specializations include land use, transportation, urban design, social policy, public health, economic development, international development, and the environment.

Contact and Address

Web: geography.utoronto.ca
Geography programs email: graduate.geography@utoronto.ca
MSc Planning program email: planning.geoplan@utoronto.ca
PhD Planning program email: graduate.planning@utoronto.ca
Geography and PhD programs telephone: (416) 978-3377
MSc Planning program telephone: (416) 946-0269
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Toronto, Ontario M5S 3G3 Canada

Geography and Planning: Graduate Faculty

Full Members

Abizaid, Christian - MA, PhD
Adams, Matthew - BES, MES, PhD
Archontitsis, George - BSc, MSc, PhD
Bathelt, Harald - MA, PhD, CRC
Besco, Laurel - BES, MA, PhD
Boland, Alana - BA, MA, PhD
Breznitz, Shiri - BA, MA, PhD
Brown, Laura - BSc, MSc, PhD
Buckley, Michelle - BES, MES, PhD
Buliung, Ronald - MA, PhD
Bunce, Susannah - BA, MES, PhD
Caspersen, John - BA, PhD
Chapple, Karen - BA, MRP, PhD
Chen, Jing - BSc, PhD
Conway, Tenley - BS, MS, PhD
Cowen, Deborah - BA, MCP, PhD
Cowling, Sharon - BSc, MSc, PhD
Creed, Irena - BSc, MSc, PhD
Daniere, Amrita - AB, PhD
Desloges, Joseph - BES, MSc, PhD
Desrochers, Pierre - AB, MA, PhD
Diamond, Miriam - MSc, MSc, PhD
DiFrancesco, Richard - PhD ***(Chair)***
Duval, Timothy - BSc, MSc, PhD
Ekers, Mike - BES, MES, PhD
Farber, Steven - BA, MA, PhD
Farish, Matthew - BA, PhD
Finkelstein, Sarah - AB, MPH, PhD
Florida, Richard - BA, PhD
Gertler, Meric - AB, MCP, PhD
Gilbert, Emily - PhD
Goonewardena, Kanishka - BSc, MCP, PhD
Gough, William - BSc, MSc, PhD
Hackworth, Jason - BA, MA, MCP, PhD
Harvey, Danny - BSc, MSc, PhD
He, Yuhong - PhD
Hess, Paul - BA, MA, PhD
Hunter, Mark - BA, MSS, PhD
Isaac, Marney Elizabeth - BS, MES, PhD
Isakson, Ryan - BEc, BA, PhD
Kant, Shashi - BE, MA, PhD
Kemeny, Tom - BCom, MES, PhD
Kepe, Thembela - MS, PhD
Klenk, Nicole - BS, MSc, PhD
Kuuire, Vincent Zubedaar - BA, MA, PhD
Lehnherr, Igor - BSc, PhD
Leslie, Deborah - BA, MA, PhD ***(Associate Chair, Graduate Geography)***
Liu, Jane - BSc, MSc, PhD
MacDonald, Ken - BA, MA, PhD
Malcolm, Jay - BSc, MSc, PhD
Miller, Eric - BASc, MASc, PhD
Miron, John - BA, MA, MSc, PhD
Mitchell, Carl - PhD
Mollett, Sharlene - BA, MES, DA
Montero Munoz, Sergio - BEc, MA, PhD
Mountz, Alison - BA, MA, PhD
Mullings, Beverley - PhD
Narayanareddy, Rajyashree - BA, MEc, MS, PhD
Olive, Andrea - PhD
Oswin, Natalie - BA, MA, PhD
Poland, Blake - BA, PhD
Porter, Trevor - BSc, PhD
Prudham, Scott - BASc, BA, MA, PhD
Rankin, Katharine - BA, MA, PhD
Robinson, John - BA, BA, MES, MES, PhD, PhD
Siemiatycki, Matti - BA, MSc, PhD
Silvey, Rachel - BA, MA, PhD
Simpson, Myrna - BS, DPhil
Singh, Neera - BSc, MF, PhD
Sorensen, Andre - BFA, MSc, PhD
Szeman, Imre - BA, MA, PhD
Vinodrai, Tara - BA, MA, PhD
Wakefield, Sarah - BA, MA, PhD ***(Graduate Chair)***
Walks, Alan - BA, MA, PhD
Widener, Michael - PhD ***(Chair)***
Wilson, Kathleen - AB, AM, PhD
Zhang, Jun - BS, MS, PhD

Members Emeriti

Bourne, Larry - BA, MA, PhD
Britton, John - BA, MA, PhD
Greenwood, Brian - BSc, PhD
Jaakson, Reiner - BA, MSc, PhD
Lewis, Robert - BA, MA, PhD
Maclaren, Virginia - BA, MRP, MSc, PhD
Ruddick, Susan - PhD
Smith, C. Tattersall - BA, MS, PhD

Associate Members

Allahwala, Ahmed - MA, PhD
Antabe, Roger - BA, MA, PhD
Arain, Altaf - BE, MS, PhD
Bell, Terrence - BSc, MSc, PhD
Boyes, Don - BS, MA, PhD
Brail, Shauna - BA, MA, PhD
Calderon Figueroa, Fernando Alberto - BA, MA, PhD
Daigle, Michelle - BA, MA, PhD
Dantzler, Prentiss - BS, MSc, MPA, PhD
Dorries, Heather - BA, MS, PhD
Dunn, James - AB, AM, PhD
Farrow, John - MBA
Higgins, Christopher - BA, MA, PhD
Hyde, Zachary - BA, MA, PhD
Laliberte, Nicole - BA, MS, PhD
Latulippe, Nicole Monique - BA, MA, PhD
Leydon, Joseph - BA, MA, PhD
Mah, Julie - BA, MSc, PhD, PhD
Mehta, Aditi - DA
Peirce, Sarah - BSc, MSc, PhD

Redden, Tyeshia - PhD
Roberts, David - DA
Ross, Cody - BES, BSc, MSc, PhD
Ross, Tim - PhD
Shang, Jiali - DSc
Smith, Lindsey Gail - PhD
Spicer, Jason - PhD
Staebler, Ralf - PhD
Stephens, Lindsay - BA, BA, MSc, MSc, PhD, PhD
Subramanyam, Nidhi - BArch, MRP
Tarasick, David - BSc, MSc, PhD
Temenos, Cristina - PhD
Tozer, Laura Molly - BSc, MA, PhD

Geography and Planning: Geography MA

The **Master of Arts (MA) program** offers studies in areas of human geography, including historical/social/cultural geography, urban/economic geography, environmental geography and resource management and some areas of spatial information systems. Applicants should apply to the MA degree program (rather than the MSc) if their planned research contains a substantial human geography component and if two-thirds of their planned coursework comprises Geography courses accepted by the department as social science courses.

MA Program (Thesis Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Geography and Planning's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with a minimum standing equivalent to at least a University of Toronto B+ in the final two years.
- Applicants are expected to have completed at least 4.0 full-course equivalents (FCEs) in geography or a related field. Applicants lacking the minimum requirements should consider doing qualifying work at the undergraduate level prior to application. Such work should be undertaken in consultation with the Graduate Coordinator. Applicants who hold an appropriate bachelor's degree but are changing disciplines or require further preparatory work, may be required to complete an additional year of graduate-level coursework.

Completion Requirements

- Progress into the second session is dependent on achieving an overall B average in the first session and satisfactory progress as outlined in the Graduate Geography Handbook.
- Students undertake research leading to the preparation of a thesis, in conjunction with at least the equivalent of **1.5 FCEs** in coursework including:
  - 0.5 FCE core course GGR1105H *Human Geography Core Course*;
  - 0.5 FCE elective course in geography or from an approved list of courses available from the department; and
  - 0.5 FCE elective course that may be taken inside or outside the department.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MA Program (Research Paper Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Geography and Planning's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with a minimum standing equivalent to at least a University of Toronto B+ in the final two years.
- Applicants are expected to have completed at least 4.0 full-course equivalents (FCEs) in geography or a related field. Applicants lacking the minimum requirements should consider doing qualifying work at the undergraduate level prior to application. Such work should be undertaken in consultation with the Graduate Coordinator. Applicants who hold an appropriate bachelor's degree but are changing disciplines or require further preparatory work, may be required to complete an additional year of graduate-level coursework.

Completion Requirements

- Progress into the second session is dependent on achieving an overall B average in the first session and satisfactory progress as outlined in the Graduate Geography Handbook.
- Students will undertake research leading to the preparation of a major research paper (GGR1100Y *Research Paper*), in conjunction with the equivalent of **3.0 graduate FCEs** in coursework including:
  - 0.5 FCE core course GGR1105H *Human Geography Core Course*;
  - 1.5 FCE elective courses in geography or from an approved list of courses available from the department; and
  - 1.0 FCE elective courses, 0.5 FCE of which must be taken outside the department.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Geography and Planning: Geography MSc

The **Master of Science (MSc) program** offers studies in the areas of physical geography, spatial information systems and some areas of environmental studies. Applicants should apply to the MSc degree program (rather than the MA) if their planned research contains a substantial physical science component and if two-thirds of their planned coursework comprises Geography courses accepted by the department as physical science courses.

MSc Program (Thesis Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Geography and Planning's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with a minimum standing equivalent to at least a University of Toronto B+ in the final two years.
- Applicants are expected to have completed at least 4.0 full-course equivalents (FCEs) in geography or a related discipline. Applicants lacking the minimum requirements should consider doing qualifying work at the undergraduate level prior to application. Such work should be undertaken in consultation with the Graduate Coordinator. Applicants who hold an appropriate bachelor's degree but are changing disciplines or require further preparatory work, may be required to complete an additional year of graduate-level coursework.

Completion Requirements

- Progress into the second session is dependent on achieving an overall B average in the first session and satisfactory progress as outlined in the Graduate Geography Handbook.
- Students undertake research leading to the preparation of a thesis, in conjunction with at least the equivalent of **1.5 FCEs** in coursework including:
  - 0.5 FCE core course GGR1200H *Physical Geography Core Course*;
  - 0.5 FCE elective course in geography or from an approved list of courses available from the department; and
  - 0.5 FCE elective course that may be taken inside or outside the department.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MSc Program (Research Paper Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Geography and Planning's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with a minimum standing equivalent to at least a University of Toronto B+ in the final two years.
- Applicants are expected to have completed at least 4.0 full-course equivalents (FCEs) in geography or a related discipline. Applicants lacking the minimum requirements should consider doing qualifying work at the undergraduate level prior to application. Such work should be undertaken in consultation with the Graduate Coordinator. Applicants who hold an appropriate bachelor's degree but are changing disciplines or require further preparatory work, may be required to complete an additional year of graduate-level coursework.

Completion Requirements

- Progress into the second session is dependent on achieving an overall B average in the first session and satisfactory progress as outlined in the Graduate Geography Handbook.
- Students will undertake research leading to the preparation of a major research paper (GGR1100Y *Research Paper*), in conjunction with the equivalent of **3.0 graduate FCEs** in coursework including:
  - 0.5 FCE core course GGR1200H *Physical Geography Core Course*;
  - 1.5 FCE elective courses in geography or from an approved list of courses available from the department; and
  - 1.0 FCE elective courses, 0.5 FCE of which must be taken outside the department.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Geography and Planning: Geography PhD

The **Doctor of Philosophy (PhD)** is primarily a research degree. A program of study is designed for each student to ensure competence in a field of research and to facilitate the preparation of a dissertation.

Applicants may enter the PhD program via one of two routes: 1) following completion of a master's degree or 2) direct entry after completing a bachelor's degree.

Geography and Planning: Geography PhD; Field: Environmental Geography and Resource Management

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Geography and Planning's additional admission requirements stated below.
- An appropriate master's degree from a recognized university, with a minimum standing equivalent to at least a University of Toronto A–.

Completion Requirements

- Complete a minimum of **3.0 full-course equivalents (FCEs)** in coursework including:
  - 0.5 FCE core course GGR1110H *Issues in Geographic Thought and Practice.*
  - 1.0 FCE in geography courses or from a list of approved courses available from the department.
  - At least 0.5 FCE but not more than 1.5 FCE courses in other departments.
  - In exceptional cases, at the discretion of the department, up to 1.0 FCE of graduate courses completed at the master's level at the University of Toronto may be counted towards meeting some course requirements.
  - Students who hold an appropriate master's degree but are changing disciplines or require further preparatory work may be required to complete additional coursework.
- Submit a **research statement** concerning the proposed PhD topic and the scope of the PhD examination by the end of April in Year 1.
- Pass a **PhD examination** in the general field in which research is being undertaken between June of Year 1 and no later than December of Year 2. The scope and areas of concentration of the exam are to be determined jointly by the supervisory committee and the student. There are two components of the PhD exam:
  - A written exam (options are an eight-hour closed room exam on campus in one day or over two days, or a five-day off-campus exam).
  - An oral exam to take place within one week of the written exam.
- A student who fails the PhD examination may retake the exam once within six months. Failure of the second exam may result in a recommendation for termination from the program.
- Acquire knowledge of a **foreign language** necessary for research upon the recommendation of the supervisory committee.
- Submit a **research proposal** that is acceptable to the supervisory committee, normally by the end of June of Year 2 and no later than September of Year 3.
- Unless otherwise specified, two years of **residence** are required whereby the student is required to be on campus full-time and consequently in such geographical proximity as to be able to participate fully in the University activities associated with the program.
- Complete a **thesis** embodying the results of original investigation, conducted by the candidate, on the approved topic from a major area of study. The thesis shall constitute a significant contribution to the knowledge of the field and must be conducted while the student is registered in the PhD program.
- See the Graduate Geography Handbook and visit the department's website.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Geography and Planning's additional admission requirements stated below.
- In exceptional cases and at the discretion of the department, admission to the PhD program by direct entry may be approved for applicants with an overall A average and appropriate bachelor's degree from a recognized university.

Completion Requirements

- Complete a minimum of **3.0 full-course equivalents (FCEs)** in coursework as follows:
  - 0.5 FCE core course GGR1110H *Issues in Geographic Thought and Practice*.
  - 1.0 FCE in geography courses or from a list of approved courses available from the department.
  - at least 0.5 FCE but no more than 1.5 FCE courses in other departments.
- Submit a **research statement** concerning the proposed PhD topic and the scope of the PhD examination by the end of April in Year 1.
- Pass a **PhD examination** in the general field in which research is being undertaken between June of Year 1 and no later than December of Year 2. The scope and areas of concentration of the exam are to be determined jointly by the supervisory committee and the student. There are two components of the PhD exam:
  - a written exam (options are an eight-hour closed room exam on campus in one day or over two days, or a five-day off-campus exam), and
  - an oral exam to take place within one week of the written exam.
- A student who fails the PhD examination may retake the exam once within six months. Failure of the second exam may result in a recommendation for termination from the program.

- Acquire knowledge of a **foreign language** necessary for the research upon the recommendation of the supervisory committee.
- Submit a **research proposal** that is acceptable to the supervisory committee, normally by the end of June of Year 2 and no later than September of Year 3.
- Unless otherwise specified, two years of **residence** are required whereby the student is required to be on campus full-time and consequently in such geographical proximity as to be able to participate fully in the University activities associated with the program.
- Complete a **thesis** embodying the results of original investigation, conducted by the candidate, on the approved topic from a major area of study. The thesis shall constitute a significant contribution to the knowledge of the field and must be conducted while the student is registered in the PhD program.
- See the Graduate Geography Handbook and visit the department's website.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Geography and Planning: Geography PhD; Field: Historical/Social/Cultural Geography

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Geography and Planning's additional admission requirements stated below.
- An appropriate master's degree from a recognized university, with a minimum standing equivalent to at least a University of Toronto A–.

Completion Requirements

- Complete a minimum of **3.0 full-course equivalents (FCEs)** in coursework including:
  - 0.5 FCE core course GGR1110H *Geographic Thought and Practice.*
  - 1.0 FCE in geography courses or from a list of approved courses available from the department.
  - At least 0.5 FCE but not more than 1.5 FCE courses in other departments.
  - In exceptional cases, at the discretion of the department, up to 1.0 FCE of graduate courses completed at the master's level at the University of Toronto may be counted towards meeting some course requirements.
  - Students who hold an appropriate master's degree but are changing disciplines or require further preparatory work may be required to complete additional coursework.
- Submit a **research statement** concerning the proposed PhD topic and the scope of the PhD examination by the end of April in Year 1.
- Pass a **PhD examination** in the general field in which research is being undertaken between June of Year 1 and no later than December of Year 2. The scope and areas of concentration of the exam are to be determined jointly by the supervisory committee and the student. There are two components of the PhD exam:
  - A written exam (options are an eight-hour closed room exam on campus in one day or over two days, or a five-day off-campus exam).
  - An oral exam to take place within one week of the written exam.
- A student who fails the PhD examination may retake the exam once within six months. Failure of the second exam may result in a recommendation for termination from the program.
- Acquire knowledge of a **foreign language** necessary for research upon the recommendation of the supervisory committee.
- Submit a **research proposal** that is acceptable to the supervisory committee, normally by the end of June of Year 2 and no later than September of Year 3.
- Unless otherwise specified, two years of **residence** are required whereby the student is required to be on campus full-time and consequently in such geographical proximity as to be able to participate fully in the University activities associated with the program.
- Complete a **thesis** embodying the results of original investigation, conducted by the candidate, on the approved topic from a major area of study. The thesis shall constitute a significant contribution to the knowledge of the field and must be conducted while the student is registered in the PhD program.
- See the Graduate Geography Handbook and visit the department's website.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Geography and Planning's additional admission requirements stated below.
- In exceptional cases and at the discretion of the department, admission to the PhD program by direct entry may be approved for applicants with an overall A average and appropriate bachelor's degree from a recognized university.

Completion Requirements

- Complete a minimum of **3.0 full-course equivalents (FCEs)** in coursework as follows:

    - 0.5 FCE core course GGR1110H *Geographic Thought and Practice*.
    - 1.0 FCE in geography courses or from a list of approved courses available from the department.
    - at least 0.5 FCE but no more than 1.5 FCE courses in other departments.
- Submit a **research statement** concerning the proposed PhD topic and the scope of the PhD examination by the end of April in Year 1.
- Pass a **PhD examination** in the general field in which research is being undertaken between June of Year 1 and no later than December of Year 2. The scope and areas of concentration of the exam are to be determined jointly by the supervisory committee and the student. There are two components of the PhD exam:
    - a written exam (options are an eight-hour closed room exam on campus in one day or over two days, or a five-day off-campus exam), and
    - an oral exam to take place within one week of the written exam.
- A student who fails the PhD examination may retake the exam once within six months. Failure of the second exam may result in a recommendation for termination from the program.
- Acquire knowledge of a **foreign language** necessary for the research upon the recommendation of the supervisory committee.
- Submit a **research proposal** that is acceptable to the supervisory committee, normally by the end of June of Year 2 and no later than September of Year 3.
- Unless otherwise specified, two years of **residence** are required whereby the student is required to be on campus full-time and consequently in such geographical proximity as to be able to participate fully in the University activities associated with the program.
- Complete a **thesis** embodying the results of original investigation, conducted by the candidate, on the approved topic from a major area of study. The thesis shall constitute a significant contribution to the knowledge of the field and must be conducted while the student is registered in the PhD program.
- See the Graduate Geography Handbook and visit the department's website.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Geography and Planning: Geography PhD; Field: Physical Geography and Natural Systems

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Geography and Planning's additional admission requirements stated below.
- An appropriate master's degree from a recognized university, with a minimum standing equivalent to at least a University of Toronto A–.

Completion Requirements

- Complete a minimum of **1.5 full-course equivalents (FCEs)** in coursework as follows:
    - 0.5 FCE core course GGR1200H *Physical Geography Core Course.* Students who have taken GGR1200H at the master's level may take an alternative geography course*;*
    - 0.5 FCE in geography courses or from a list of approved courses available from the department;
    - 0.5 FCE in elective courses which may be taken in any departments.
    - Students who hold an appropriate master's degree but are changing disciplines or require further preparatory work may be required to complete additional coursework.
- Submit a **research statement** concerning the proposed PhD topic and the scope of the PhD examination by the end of April in Year 1.
- Pass a **PhD examination** in the general field in which research is being undertaken between June of Year 1 and no later than December of Year 2. The scope and areas of concentration of the exam are to be determined jointly by the supervisory committee and the student. There are two components of the PhD exam:
    - A written exam (options are an eight-hour closed room exam on campus in one day or over two days, or a five-day off-campus exam).
    - An oral exam to take place within one week of the written exam.
- A student who fails the PhD examination may retake the exam once within six months. Failure of the second exam may result in a recommendation for termination from the program.
- Acquire knowledge of a **foreign language** necessary for research upon the recommendation of the supervisory committee.
- Submit a **research proposal** that is acceptable to the supervisory committee, normally by the end of June of Year 2 and no later than September of Year 3.
- Unless otherwise specified, two years of **residence** are required whereby the student is required to be on campus full-time and consequently in such geographical proximity as to be able to participate fully in University activities associated with the program.
- Complete a **thesis** embodying the results of original investigation, conducted by the candidate, on the approved topic from a major area of study. The thesis shall constitute a significant contribution to the knowledge of the field and must be conducted while the student is registered in the PhD program.
- See the Graduate Geography Handbook and visit the department's website.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Geography and Planning's additional admission requirements stated below.
- In exceptional cases and at the discretion of the department, admission to the PhD program by direct entry may be approved for applicants with an overall A average and an appropriate bachelor's degree from a recognized university.

Completion Requirements

- Complete a minimum of **3.0 full-course equivalents (FCEs)** as follows:
  - 0.5 FCE core course GGR1200H *Physical Geography Core Course;*
  - 0.5 FCE in geography courses or from a list of approved courses available from the department;
  - 2.0 FCE in elective courses which may be taken in any department.
- Submit a **research statement** concerning the proposed PhD topic and the scope of the PhD examination by the end of April in Year 1.
- Pass a **PhD examination** in the general field in which research is being undertaken between June of Year 1 and no later than December of Year 2. The scope and areas of concentration of the exam are to be determined jointly by the supervisory committee and the student. There are two components of the PhD exam:
  - A written exam (options are an eight-hour closed room exam on campus in one day or over two days, or a five-day off-campus exam).
  - An oral exam to take place within one week of the written exam.
- A student who fails the PhD examination may retake the exam once within six months. Failure of the second exam may result in a recommendation for termination from the program.
- Acquire knowledge of a **foreign language** necessary for their research upon the recommendation of their supervisory committee.
- Submit a **research proposal** that is acceptable to the supervisory committee, normally by the end of June of Year 2 and no later than September of Year 3.
- Unless otherwise specified, two years of **residence** are required whereby the student is required to be on campus full-time and consequently in such geographical proximity as to be able to participate fully in the University activities associated with the program.
- Complete a **thesis** embodying the results of original investigation, conducted by the candidate, on the approved topic from a major area of study. The thesis shall constitute a significant contribution to the knowledge of the field and must be conducted while the student is registered in the PhD program.
- See the Graduate Geography Handbook and visit the department's website.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Geography and Planning: Geography PhD; Field: Spatial Information Systems

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Geography and Planning's additional admission requirements stated below.
- An appropriate master's degree from a recognized university, with a minimum standing equivalent to at least a University of Toronto A–.

Completion Requirements

- Complete a minimum of **1.5 full-course equivalents (FCEs)** in coursework as follows:
  - 0.5 FCE core course GGR1200H *Physical Geography Core Course.* Students who have taken GGR1200H at the master's level may take an alternative geography course*;*
  - 0.5 FCE in geography courses or from a list of approved courses available from the department;
  - 0.5 FCE in elective courses which may be taken in any departments.
  - Students who hold an appropriate master's degree but are changing disciplines or require further preparatory work may be required to complete additional coursework.
- Submit a **research statement** concerning the proposed PhD topic and the scope of the PhD examination by the end of April in Year 1.
- Pass a **PhD examination** in the general field in which research is being undertaken between June of Year 1 and no later than December of Year 2. The scope and areas of concentration of the exam are to be determined jointly by the supervisory committee and the student. There are two components of the PhD exam:
  - A written exam (options are an eight-hour closed room exam on campus in one day or over two days, or a five-day off-campus exam).
  - An oral exam to take place within one week of the written exam.
- A student who fails the PhD examination may retake the exam once within six months. Failure of the second exam may result in a recommendation for termination from the program.
- Acquire knowledge of a **foreign language** necessary for research upon the recommendation of the supervisory committee.
- Submit a **research proposal** that is acceptable to the supervisory committee, normally by the end of June of Year 2 and no later than September of Year 3.

- Unless otherwise specified, two years of **residence** are required whereby the student is required to be on campus full-time and consequently in such geographical proximity as to be able to participate fully in University activities associated with the program.
- Complete a **thesis** embodying the results of original investigation, conducted by the candidate, on the approved topic from a major area of study. The thesis shall constitute a significant contribution to the knowledge of the field and must be conducted while the student is registered in the PhD program.
- See the Graduate Geography Handbook and visit the department's website.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Geography and Planning's additional admission requirements stated below.
- In exceptional cases and at the discretion of the department, admission to the PhD program by direct entry may be approved for applicants with an overall A average and an appropriate bachelor's degree from a recognized university.

Completion Requirements

- Complete a minimum of **3.0 full-course equivalents (FCEs)** as follows:
  - 0.5 FCE core course GGR1200H *Physical Geography Core Course;*
  - 0.5 FCE in geography courses or from a list of approved courses available from the department;
  - 2.0 FCE in elective courses which may be taken in any department.
- Submit a **research statement** concerning the proposed PhD topic and the scope of the PhD examination by the end of April in Year 1.
- Pass a **PhD examination** in the general field in which research is being undertaken between June of Year 1 and no later than December of Year 2. The scope and areas of concentration of the exam are to be determined jointly by the supervisory committee and the student. There are two components of the PhD exam:
  - A written exam (options are an eight-hour closed room exam on campus in one day or over two days, or a five-day off-campus exam).
  - An oral exam to take place within one week of the written exam.
- A student who fails the PhD examination may retake the exam once within six months. Failure of the second exam may result in a recommendation for termination from the program.
- Acquire knowledge of a **foreign language** necessary for their research upon the recommendation of their supervisory committee.
- Submit a **research proposal** that is acceptable to the supervisory committee, normally by the end of June of Year 2 and no later than September of Year 3.
- Unless otherwise specified, two years of **residence** are required whereby the student is required to be on campus full-time and consequently in such geographical proximity as to be able to participate fully in the University activities associated with the program.
- Complete a **thesis** embodying the results of original investigation, conducted by the candidate, on the approved topic from a major area of study. The thesis shall constitute a significant contribution to the knowledge of the field and must be conducted while the student is registered in the PhD program.
- See the Graduate Geography Handbook and visit the department's website.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Geography and Planning: Geography PhD; Field: Urban/Economic Geography

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Geography and Planning's additional admission requirements stated below.
- An appropriate master's degree from a recognized university, with a minimum standing equivalent to at least a University of Toronto A–.

Completion Requirements

- Complete a minimum of **3.0 full-course equivalents (FCEs)** in coursework including:
  - 0.5 FCE core course GGR1110H *Geographic Thought and Practice.*
  - 1.0 FCE in geography courses or from a list of approved courses available from the department.
  - At least 0.5 FCE but not more than 1.5 FCE courses in other departments.
  - In exceptional cases, at the discretion of the department, up to 1.0 FCE of graduate courses completed at the master's level at the University of Toronto may be counted towards meeting some course requirements.

    - Students who hold an appropriate master's degree but are changing disciplines or require further preparatory work may be required to complete additional coursework.
- Submit a **research statement** concerning the proposed PhD topic and the scope of the PhD examination by the end of April in Year 1.
- Pass a **PhD examination** in the general field in which research is being undertaken between June of Year 1 and no later than December of Year 2. The scope and areas of concentration of the exam are to be determined jointly by the supervisory committee and the student. There are two components of the PhD exam:
    - A written exam (options are an eight-hour closed room exam on campus in one day or over two days, or a five-day off-campus exam).
    - An oral exam to take place within one week of the written exam.
- A student who fails the PhD examination may retake the exam once within six months. Failure of the second exam may result in a recommendation for termination from the program.
- Acquire knowledge of a **foreign language** necessary for research upon the recommendation of the supervisory committee.
- Submit a **research proposal** that is acceptable to the supervisory committee, normally by the end of June of Year 2 and no later than September of Year 3.
- Unless otherwise specified, two years of **residence** are required whereby the student is required to be on campus full-time and consequently in such geographical proximity as to be able to participate fully in the University activities associated with the program.
- Complete a **thesis** embodying the results of original investigation, conducted by the candidate, on the approved topic from a major area of study. The thesis shall constitute a significant contribution to the knowledge of the field and must be conducted while the student is registered in the PhD program.
- See the Graduate Geography Handbook and visit the department's website.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Geography and Planning's additional admission requirements stated below.
- In exceptional cases and at the discretion of the department, admission to the PhD program by direct entry may be approved for applicants with an overall A average and appropriate bachelor's degree from a recognized university.

Completion Requirements

- Complete a minimum of **3.0 full-course equivalents (FCEs)** in coursework as follows:
    - 0.5 FCE core course GGR1110H *Issues in Geographic Thought and Practice*.
    - 1.0 FCE in geography courses or from a list of approved courses available from the department.
    - at least 0.5 FCE but no more than 1.5 FCE courses in other departments.
- Submit a **research statement** concerning the proposed PhD topic and the scope of the PhD examination by the end of April in Year 1.
- Pass a **PhD examination** in the general field in which research is being undertaken between June of Year 1 and no later than December of Year 2. The scope and areas of concentration of the exam are to be determined jointly by the supervisory committee and the student. There are two components of the PhD exam:
    - a written exam (options are an eight-hour closed room exam on campus in one day or over two days, or a five-day off-campus exam), and
    - an oral exam to take place within one week of the written exam.
- A student who fails the PhD examination may retake the exam once within six months. Failure of the second exam may result in a recommendation for termination from the program.
- Acquire knowledge of a **foreign language** necessary for the research upon the recommendation of the supervisory committee.
- Submit a **research proposal** that is acceptable to the supervisory committee, normally by the end of June of Year 2 and no later than September of Year 3.
- Unless otherwise specified, two years of **residence** are required whereby the student is required to be on campus full-time and consequently in such geographical proximity as to be able to participate fully in the University activities associated with the program.
- Complete a **thesis** embodying the results of original investigation, conducted by the candidate, on the approved topic from a major area of study. The thesis shall constitute a significant contribution to the knowledge of the field and must be conducted while the student is registered in the PhD program.
- See the Graduate Geography Handbook and visit the department's website.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Geography and Planning: Planning MScPl

Students normally enrol in the **Master of Science in Planning (MScPl)** for two years of full-time study, although part or all of the requirements of the program may be met by part-time study, with the approval of the Program Director.

MScPl General Program (No Concentration)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Geography and Planning's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university, with a minimum final-year standing in the social or life sciences, the humanities, or the professions, equivalent to at least a University of Toronto B+. Knowledge of introductory economics and statistics, as well as word processing and spreadsheet skills, is preferred prior to entry.

Completion Requirements

- The program consists of **8.0 full-course equivalents (FCEs)** plus the PLA4444Y **internship**, taken over two years, as follows:
  - 4.0 FCEs in core courses:
    - PLA1101H *Planning History, Thought, and Practice*
    - PLA1102H *Planning Decision Methods I*
    - PLA1103H *Legal Basis of Planning*
    - PLA1105H *Planning Decision Methods II*
    - PLA1106H *Workshop in Planning Practice*
    - PLA1107Y *Current Issues Paper*
    - PLA1108H *Communication in the Face of Power*.
  - 4.0 FCEs chosen from the list of electives and from the offerings of other departments, centres, and institutes. At least 1.5 FCEs of these electives must be from the following list:
    - PLA1525H *Urban, Regional, and Community Economic Development*
    - PLA1601H *Environmental Planning in a Changing Climate*
    - PLA1652H *Introductory Studio in Urban Design and Planning*
    - PLA1656H *Land Use Planning: Principles and Practice*
    - PLA1703H *Transportation Planning and Infrastructure*
    - PLA1813H *Planning and Social Policy*.
  - PLA4444H *Internship*. Students must pursue a planning internship between Years 1 and 2 of the program. Part-time students who are currently employed in a planning environment may be exempted from this requirement; however, the Planning Director retains final discretion in the decision.
- Progress into Year 2 of the program normally depends on the achievement of an overall B average in Year 1. Equivalent provisions apply to the part-time option.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 12 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MScPl General Program (With a Concentration)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Geography and Planning's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university, with a minimum final-year standing in the social or life sciences, the humanities, or the professions, equivalent to at least a University of Toronto B+. Knowledge of introductory economics and statistics, as well as word processing and spreadsheet skills, is preferred prior to entry.

Completion Requirements

- The program consists of **8.0 full-course equivalents (FCEs)** plus the PLA4444Y **internship**, taken over two years, as follows:
  - 4.0 FCEs in core courses:
    - PLA1101H *Planning History, Thought, and Practice*
    - PLA1102H *Planning Decision Methods I*
    - PLA1103H *Legal Basis of Planning*
    - PLA1105H *Planning Decision Methods II*
    - PLA1106H *Workshop in Planning Practice*
    - PLA1107Y *Current Issues Paper*
    - PLA1108H *Communication in the Face of Power*.
  - 4.0 FCEs chosen from the list of electives and from the offerings of other departments, centres, and institutes. 2.0 FCEs of these electives must be completed in one of the following concentrations:
    - Economic Development Planning
    - Environmental Planning
    - Social Planning and Policy
    - Transportation Planning and Infrastructure
    - Urban Design and Spatial Planning.
  - PLA4444H *Internship*. Students must pursue a planning internship between Years 1 and 2 of the program. Part-time students who are currently employed in a planning environment may be exempted from this requirement; however, the Planning Director retains final discretion in the decision.
- Progress into Year 2 of the program normally depends on the achievement of an overall B average in Year 1. Equivalent provisions apply to the part-time option.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 12 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Geography and Planning: Planning PhD

The **Doctor of Philosophy (PhD)** is primarily a research degree. A program of study is designed for each student to ensure competence in a field of research and to facilitate the preparation of a dissertation.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Geography and Planning's additional admission requirements stated below.
- An appropriate master's degree in planning or a related field, or its equivalent from a recognized university, with a minimum standing equivalent to at least a University of Toronto A– and demonstrated competence in analytical methods or successful completion of one of two methods courses in the current master's program.

Completion Requirements

All PhD students must:

- Take **3.0 full-course equivalents (FCEs)**, if they hold a master's degree in planning comparable to the U of T MSc in Planning, as follows:
  - 1.5 FCEs in core courses:
    - JPG1120H *Advanced Qualitative Research: Methodology and Epistemological Foundations for Planning and Geography*
    - PLA2000H *Advanced Planning Theory*
    - PLA2001H *Planning Colloquium*.
  - 1.5 FCEs in electives (at least 0.5 elective FCE must be outside the Planning program).

Students who enter with a master's degree in a related field may be required to take up to an additional 1.0 FCE depending on their background and experience.

- Submit a **research statement** concerning the proposed PhD topic and the scope of the PhD examination by the end of April in Year 1.
- Pass a **PhD examination** in the general field in which research is being undertaken between June of Year 1 and no later than December of Year 2. The scope and areas of concentration of the exam are to be determined jointly by the supervisory committee and the student. There are two components of the PhD exam:
  - a written exam (options are an eight-hour closed room exam on campus in one day or over two days, or a five-day off-campus exam); and
  - an oral exam to take place within one week of the written exam.

A student who fails the PhD examination may retake the exam once within six months. A failure of the second exam may result in recommendation for termination of the student's program.

- Acquire knowledge of a **foreign language** necessary for their research upon the recommendation of their committee.
- Submit a **research proposal** that is acceptable to their research committee, normally by the end of June of Year 2 and no later than September of Year 3.
- Be in **residence** for two years, unless otherwise specified, during which the student is required to be on campus full-time and consequently in such geographical proximity as to be able to participate fully in the University activities associated with the program.
- Complete a **thesis** embodying the results of original investigation, conducted by the candidate, on the approved topic from a major area of study. The thesis shall constitute a significant contribution to the knowledge of the field and must be conducted while the student is registered in the PhD program.
- PhD degree program details are fully described in the Graduate Planning Handbook and the department's website.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

Geography and Planning: Geography MA, MSc, PhD Courses

The following graduate courses will be available on demand and subject to faculty resources. Not all courses are given every year, and some members of the graduate faculty are on research leave. Please consult the departmental graduate office. The 2000-level courses are normally open to PhD students only.

Core Courses

Course Code	Course Title
GGR1105H	Human Geography Core Course
GGR1110H	Geographic Thought and Practice
GGR1200H	Physical Geography Core Course

Research Methods Courses

Course Code	Course Title
GGR1111H	Social Research Methods
JPG1120H	Advanced Qualitative Research: Methodology and Epistemological Foundations for Planning and Geography
JPG1130H	Qualitative Data Analysis: Coding, Interpreting, and Writing Qualitative Research
JPG1170H	Statistical Testing and Analysis
GGR1218H	Quantitative, Open-Source Methods in Physical Geography Research

Course Code	Course Title
JPG1400H	Advanced Quantitative Methods

Individual Topics Courses

Course Code	Course Title
GGR1149H	Readings in Selected Topics
GGR1149Y	Readings in Selected Topics
GGR2149H	Readings in Selected Topics
GGR2149Y	Readings in Selected Topics
GGR2150H	Advanced Seminar in Selected Topics
GGR2150Y	Advanced Seminar in Selected Topics
JPG2150H	Advanced Seminars in Selected Topics
GGR2151H	Advanced Seminars in Selected Topics II
JPG2151H	Advanced Seminars in Selected Topics II

Environmental and Resource Geography

Course Code	Course Title
GGR1404H	Global Warming
JPG1404H	Issues in Global Warming
GGR1407H	Energy Efficiency and Beyond
GGR1408H	Carbon-Free Energy
GGR1411H	Nature and Justice in the Anthropocene
GGR1422H	The Geography of Urban Air Pollution
JGE1425H	Livelihoods, Poverty, and Environment in the Global South
JPG1426H	Natural Resources, Difference, and Conflict
JPG1428H	Greening the City: Urban Environmental Planning and Management
JPG1429H	Political Ecology of Food and Agriculture
FOR1610H	Sustainable Forest Management and Certification

Geographical Information Analysis

Course Code	Course Title
JPG1906H	Geographic Information Systems
JPG1909H	Advanced Space-Time Data Analysis and Visualization
GGR1911H	Remote Sensing
GGR1912H	Advanced Remote Sensing
JPG1914H	Geographic Information Systems Research Project
GGR1916H	Remote Sensing of Vegetation Traits and Function
GGR1921H	Land/Geographic Information Systems

Historical, Social, and Cultural Geography

Course Code	Course Title
JPG1503H	Space, Time, Revolution
JPG1506H	State/Space/Difference: Understanding the New Social Geography of the State
JPG1511H	Governing the Environmental Commons
JPG1520H	Contested Geographies of Class-Race Formations
JPG1522H	Production of Space: Aesthetics, Technology, Politics
GGR1705H	Historical Geographies of Modernity
JPG1706H	Violence and Security
JPG1805H	Transnationalism, Diaspora, and Gender
GGR1807H	Geographies of Postcoloniality and Development: Exploring the ‘Infrastructure Turn’
JPG1809H	Spaces of Work: Value, Identity, Agency, Justice
JPG1812Y	Planning for Change: Community Development in Practice
JPG1813H	Social Planning and Policy
JPG1815H	Political Economy, the Body, and Health
JPG1816H	Geographies of Secularism, and Islam and Gender
JPG1817H	Geographies of Drug Use: History, Power, and Space
JPG1818H	Climate Action and Activism
GGR1821H	China Development Seminar
GGR1822H	Queer Geographies
JPG1825H	Black Geographies of the Atlantic
JPG1828H	Place and Indigenous Research

Course Code	Course Title
JPG1830H	Utopia/Dystopia
GGR1832H	Geographies of Decolonization and Liberation
JPG1835H	Anti-Colonial Planning: Theory and Practice

Physical Geography

Course Code	Course Title
GGR1215H	Advanced Watershed Hydroecology
GGR1216H	Advanced Biogeochemical Processes
GGR1217H	The Climate of the Arctic
GGR1302H	Advanced Hydrology and Water Quality
GGR1315H	The Cryosphere: Canada's Frozen Environments

Urban and Economic Geography

Course Code	Course Title
JPG1502H	Global Urbanism and Cities of the Global South
JPG1504H	Institutionalism and Cities: Space, Governance, Property and Power
JPG1507H	Housing Policy and Planning
JPG1512H	Place, Politics, and the Urban
JPG1513H	Toronto Urban Landscapes: Planning, Politics, and Development
JPG1516H	Urban Problems
JPG1518H	Sustainability and Urban Communities
JPG1554H	Transportation and Urban Form
JPG1558H	The History and Geography of Cycles and Cycling
JPG1605H	The Post-Industrial City
JGE1609H	Cities, Industry, and the Environment
GGR1610H	Geography of Finance and Financial Crisis
JPG1615H	Planning and the Social Economy
JPG1616H	The Cultural Economy
JPG1617H	Organization of Economies and Cities
JPG1621H	Innovation and Governance
JPG1660H	Regional Dynamics
JPG1670H	Regional Economic Analysis
JPG1814H	Cities and Immigrants
JPG1820H	Disability, Ableism, and Place
GGR1825H	Black Economic Geographies

Geography and Planning: Planning MScPl, PhD Courses

All courses are not given every year; some faculty members may be on research leave. Please consult the departmental graduate office for details.

Core Courses for the MScPl

Course Code	Course Title
PLA1101H	Planning History, Thought, and Practice
PLA1102H	Planning Decision Methods I
PLA1103H	Legal Basis of Planning
PLA1105H	Planning Decision Methods II
PLA1106H	Workshop in Planning Practice
PLA1107Y	Current Issues Paper
PLA1108H	Communication in the Face of Power

Core Courses for the PhD in Planning

Course Code	Course Title
JPG1120H	Advanced Qualitative Research: Methodology and Epistemological Foundations for Planning and Geography
PLA2000H	Advanced Planning Theory
PLA2001H	Planning Colloquium

Elective Courses

Course Code	Course Title
PLA1108H	Communication in the Face of Power
JPG1120H	Advanced Qualitative Research: Methodology and Epistemological Foundations for Planning and Geography
JPG1130H	Qualitative Data Analysis: Coding, Interpreting, and Writing Qualitative Research

Course Code	Course Title
PLA1149H	Independent Study
PLA1150H	Planning Field Trip Course
JPG1170H	Statistical Testing and Analysis
JPG1400H	Advanced Quantitative Methods
JPG1416H	Environmental Consequences of Land Use Change
JPG1418H	Rural Land Use Planning
JGE1420H	Urban Waste Management: an International Perspective
JPG1426H	Natural Resources, Difference, and Conflict
JPG1428H	Greening the City: Urban Environmental Planning and Management
JPG1429H	Political Ecology of Food and Agriculture
JPG1502H	Global Urbanism and Cities of the Global South
JPG1503H	Space, Time, Revolution
JPG1504H	Institutionalism and Cities: Space, Governance, Property, and Power
JPG1506H	State/Space/Difference: Understanding the New Social Geography of the State
JPG1507H	Housing Policy and Planning
PLA1510H	Special Topics in Planning
JPG1511H	Governing the Environmental Commons
JPG1512H	Place, Politics, and the Urban
JPG1513H	Toronto Urban Landscapes: Planning, Politics, and Development
JPG1516H	Urban Problems
PLA1516H	Special Topics in Planning II
PLA1517H	Special Topics in Planning III
JPG1518H	Sustainability and Urban Communities
PLA1518H	City Building — Practice and Experience in Toronto and Other World Cities
JPG1520H	Contested Geographies of Class-Race Formations
PLA1520H	Project Management and Conflict Resolution for Planners
JPG1522H	Production of Space: Aesthetics, Technology, Politics
PLA1525H	Urban, Regional, and Community Economic Development
PLA1551H	Policy Analysis
PLA1552H	Leadership and Management for Planners

Course Code	Course Title
JPG1554H	Transportation and Urban Form
JPG1558H	The History and Geography of Cycles and Cycling
PLA1601H	Environmental Planning in a Changing Climate
JPG1605H	The Post-Industrial City
JPG1615H	Planning and the Social Economy
JPG1616H	The Cultural Economy
JPG1617H	Organization of Economies and Cities
JPG1621H	Innovation and Governance
PLA1651H	Planning and Real Estate Development
PLA1652H	Introductory Studio in Urban Design and Planning
PLA1653H	Advanced Studio in Urban Design and Planning
PLA1654H	Urban Design Research Methods
PLA1655H	Urban Design and Development Controls
PLA1656H	Land Use Planning: Principles and Practice
JPG1660H	Regional Dynamics
JPG1670H	Regional Economic Analysis
PLA1702H	Pedestrians, Streets, and Public Space
PLA1703H	Transportation Planning and Infrastructure
JPG1706H	Violence and Security
PLA1751H	Public Finance for Planners
JPG1805H	Transnationalism, Diaspora, and Gender
GGR1807H	Geographies of Postcoloniality and Development: Exploring the ‘Infrastructure Turn’
JPG1809H	Spaces of Work: Value, Identity, Agency, Justice
JPG1810H	Globalization and Postmodernism
JPG1812Y	Planning for Change: Community Development in Practice
JPG1813H	Social Planning and Policy
JPG1814H	Cities and Immigrants
JPG1816H	Geographies of Secularism, and Islam and Gender
JPG1817H	Geographies of Drug Use: History, Power, and Space
JPG1818H	Climate Action and Activism
JPG1820H	Disability, Ableism, and Place
JPG1825H	Black Geographies of the Atlantic

Course Code	Course Title
JPG1828H	Place and Indigenous Research
JPG1830H	Utopia/Dystopia
JPG1835H	Anti-Colonial Planning: Theory and Practice
JPG1906H	Geographic Information Systems
JPG1909H	Advanced Space-Time Data Analysis and Visualization
JPG1914H	Geographic Information Systems Research Project
JPG2150H	Advanced Seminars in Selected Topics
JPG2151H	Advanced Seminars in Selected Topics II
PLA4444H	Internship (Designates the internship to be undertaken by master's students in the Planning program. It cannot be used to fulfil other course requirements for the degree.)

Germanic Languages and Literatures

Germanic Languages and Literatures: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Germanic Languages and Literatures

MA

- Fields:
  - German Literature, Culture and Theory;
  - Yiddish Studies

Germanic Literature, Culture and Theory

PhD

- Field:
  - Germanic Literature, Culture and Theory

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Book History and Print Culture**
  - Germanic Languages and Literatures, MA
  - Germanic Literature, Culture and Theory, PhD
- **Diaspora and Transnational Studies**
  - Germanic Languages and Literatures, MA
  - Germanic Literature, Culture and Theory, PhD
- **Jewish Studies**
  - Germanic Languages and Literatures, MA
  - Germanic Literature, Culture and Theory, PhD
- **Women and Gender Studies**
  - Germanic Languages and Literatures, MA
  - Germanic Literature, Culture and Theory, PhD

Overview

The Department of Germanic Languages and Literatures at the University of Toronto is the oldest and largest department of German in Canada encompassing 11 full-time faculty who contribute to a curriculum that speaks to our traditional strength in literary and intellectual history. Our faculty and students conduct research in German cinema, critical theory, language pedagogy, Yiddish studies, medieval studies, travel literature, as well as post-colonial, psychoanalytic, and transnational studies.

Past graduates have secured tenure-track teaching positions as well as employment in the arts, in cultural programming, the publishing industry, and educational administration. We are committed to providing our graduate students with exposure to a diversity of methodological approaches among our faculty and those of affiliate units. We also emphasize early progress towards professionalization through participation in faculty research projects, attendance at local and international conferences, and enrolment in campus writing workshops. We cultivate a departmental climate of mutual respect and collegiality in the shared pursuit of critical inquiry.

The department offers a graduate program of study leading to two degrees: **Master of Arts** and **Doctor of Philosophy**. The MA degree usually takes eight months (September to April) to complete, while the PhD degree is normally completed in four to five years.

Contact and Address

Web: german.utoronto.ca
Email: german.gradadmin@utoronto.ca
Telephone: (416) 926-2321

Department of Germanic Languages and Literatures
3rd Floor, 50 St. Joseph Street
University of Toronto
Toronto, Ontario M5S 1J4 Canada

Germanic Languages and Literatures: Graduate Faculty

Full Members

Fenner, Angelica - BA, MA, PhD ***(Graduate Coordinator)***
Goetschel, Willi - PhD
Lehleiter, Christine - MA, PhD
Noyes, John - BA, MA, PhD
Shternshis, Anna - MA, PhD
Soldovieri, Stefan - BA, MA, PhD ***(Chair and Graduate Chair)***
Stock, Markus - MA, PhD
Zilcosky, John - BA, MA, MA, PhD

Associate Members

Bergen, Doris - MA, PhD
Budde, Antje - PhD
Clark, Caryl - BMus, MA, PhD
Cohen, Adam - PhD
Comay, Rebecca - BA, MA, PhD
DiCenso, James - BA, MA, PhD
Esterhammer, Angela - BA, PhD
Gibbs, Robert - BA, MA, PhD
Jenkins, Jennifer - BA, MA, PhD

Kaplan, Louis - AB, AM, DPhil
Kim, Hang-Sun - AB, MA, PhD
Lahusen, Thomas - MA, PhD
Levy, Evonne - MFA, PhD
Retallack, James - BA, DPhil
Revermann, Martin - PhD
Seidman, Naomi - PhD
Wittmann, Rebecca - AB, MA, PhD

Germanic Languages and Literatures: Germanic Languages and Literatures MA

The **Master of Arts (MA) degree** in Germanic Languages and Literatures is offered in two fields:

- German Literature, Culture and Theory
- Yiddish Studies

The course-based, one-year MA program normally spans two sessions. Students have the option to concurrently enrol in one of the collaborative specializations at U of T, such as Women and Gender Studies, Jewish Studies, Transnational and Diaspora Studies, or Book History and Print Culture. This also requires registration in their respective core course(s). The MA in German is a full-time program, but may also be taken part-time under extenuating circumstances. Graduates may continue on to doctoral studies as well as embarking on careers in translation, language teaching, literary editing, cultural programming, and corporate and administrative positions requiring advanced communication and analytical skills.

Germanic Languages and Literatures: Germanic Languages and Literatures MA; Field: German Literature, Culture and Theory

MA Program; Field: German Literature, Culture and Theory

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Germanic Languages and Literatures' additional admission requirements stated below.
- Applicants to the one-year MA program in the field of German Literature, Culture and Theory must have completed an appropriate bachelor's degree from a recognized university that includes at least 6.0 full-course equivalents (FCEs) in German language, literature, and culture, with an average grade of at least a B+.
- Two reference letters.
- Admission is based upon the applicant's academic record as evidenced through transcripts from all post-secondary institutions, the reference letters, a sample of written work (such as a term paper), and a Letter of Intent (500-word maximum) identifying current career goals and areas of academic interest.

Completion Requirements

- **Coursework**. Students must successfully complete a total of **3.5 full-course equivalents (FCEs)** including:
  - GER1000H *German Studies Seminar: Culture, Theory, Text*
  - at least 1.5 FCEs of the remaining 3.0 FCEs must carry a GER designator
  - the remaining course selection which is made in consultation with the Associate Chair of Graduate Studies of the department and must be approved by the department.
- Pass a **German language competence test** at the beginning of the program. Only one attempt is permitted.

Mode of Delivery: In person
Program Length: 2 sessions full-time (typical registration sequence: FW); 5 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Germanic Languages and Literatures: Germanic Languages and Literatures MA; Field: Yiddish Studies

MA Program; Field: Yiddish Studies

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Germanic Languages and Literatures' additional admission requirements stated below.
- Applicants to the one-year MA program in the field of Yiddish Studies must have completed an appropriate bachelor's degree from a recognized university that includes at least 2.0 full-course equivalents (FCEs) in Yiddish language and 2.0 FCEs in Yiddish literature and culture or another area of Jewish Studies, with an average grade of at least a B+.
- Two reference letters.
- Admission is based upon the applicant's academic record and upon the evidence of the reference letters.

Completion Requirements

- **Coursework**. Students must successfully complete a total of **3.5 full-course equivalents (FCEs)** including:
  - GER1000H *German Studies Seminar: Culture, Theory, Text*

    - CJS1000H *Core Methods Seminar in Jewish Studies*
    - GER1050H *Methods and Texts in Yiddish Studies*
    - GER2050Y *Research Paper in Yiddish Studies*
    - the remaining elective courses (1.0 FCE) selected from a course list approved by the department.
- Pass a **Yiddish language competency test** at the beginning of the program. Only one attempt is permitted.

Mode of Delivery: In person
Program Length: 2 sessions full-time (typical registration sequence: FW); 5 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Germanic Languages and Literatures: Germanic Literature, Culture and Theory PhD

The **Doctor of Philosophy (PhD) program** in Germanic Literature, Culture, and Theory is taken on a full-time basis and is fully funded for five years. The curriculum engages debates and questions salient to the discipline of German Studies while also forging generative ties with other disciplines to facilitate a synthesis of history and theory, textual analysis, and cultural study. Students have the option to concurrently enrol in one of the collaborative specializations at U of T, such as Women and Gender Studies, Jewish Studies, Transnational and Diaspora Studies, or Book History and Print Culture. This also requires registration in their respective core course(s).

Applicants may enter the PhD program via one of two routes: 1) following completion of an appropriate master's degree or 2) direct entry following completion of an appropriate bachelor's degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Germanic Languages and Literatures' additional admission requirements stated below.
- Admission to the PhD program requires an appropriate **master's degree in German** from a recognized university, with an average grade equivalent to at least a University of Toronto A– in the applicant's overall program.
- Applicants must satisfy the department that they are capable of independent research in German at an advanced level.
- Three reference letters.
- Admission is based upon the applicant's academic record, a writing sample, a Letter of Intent (500-word maximum), and the evidence of the reference letters.

Completion Requirements

- **Coursework. Applicants admitted on the basis of a master's degree** must take a minimum of **4.0 full-course equivalents (FCEs)** including:
    - GER1000H *German Studies Seminar: Culture, Theory,* with an average grade of at least an A–.
    - At least 3.5 FCEs by the end of Year 1.
    - Any remaining courses required for the degree by the end of Year 2. Course selection may include 1.5 FCEs in a department other than Germanic Languages and Literatures.
    - Course selection is made in consultation with the Associate Chair of Graduate Studies of the department and must be approved by the department.
- Students must provide evidence of **reading knowledge of French** or, in exceptional circumstances, of another language approved by the department.
- Students must pass a **qualifying examination** with written and oral components in the second session of Year 2 of the PhD program. The qualifying examination has two components:
    - The proficiency exam is based on a student-created and committee-approved, comprehensive list of works and entails writing exams in four (4) epochs (three for the Yiddish field), followed by an oral exam.
    - The research field paper on a topic approved by the examination committee offers a means to explore key theoretical readings and test firsthand the traction of at least one central methodology pertinent to the future thesis. This paper, between 25 and 30 pages in length, is completed during the Summer session following the proficiency examination and strives towards publishable quality.
- The **thesis proposal** encompasses an abstract, literature review, detailed discussion of the methodology, tentative chapter outlines, and bibliography/mediagraphy.
- Students must pass a **thesis proposal review** under the guidance of their supervisory committee, whose members will read the proposal, and approve the examinee for doctoral candidacy.
- Students must deliver a **departmental lecture** on their dissertation topic within one year following the thesis proposal review.
- Students must submit the **doctoral thesis** and successfully complete the **Final Oral Examination**.
- The department may permit a candidate to write the doctoral thesis in German when the candidate's advisory committee so recommends and when the candidate has satisfied the School of Graduate Studies' conditions (see 12.1.2.8 Thesis section in Degree Regulations, Doctor of Philosophy).

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Germanic Languages and Literatures' additional admission requirements stated below.
- Admission to the PhD program requires an appropriate bachelor's degree from a recognized university that includes at least 6.0 full-course equivalents (FCEs) in German language, literature, and culture, with an average grade equivalent to at least a University of Toronto B+ in the applicant's overall program and of at least an A– in the applicant's German courses.
- Applicants must satisfy the department that they are capable of independent research in German at an advanced level.
- Three reference letters.
- Admission is based upon the applicant's academic record, a writing sample, a Letter of Intent (500-word maximum), and the evidence of the reference letters.

Completion Requirements

- **Coursework. Applicants admitted on the basis of a bachelor's degree** must take a minimum of **7.0 full-course equivalents (FCEs)**, including:
  - GER1000H *German Studies Seminar: Culture, Theory, Text*, with an average grade of at least an A–.
  - The department may recommend to the School of Graduate Studies the termination of the registration and eligibility of a student who fails to complete at least 3.5 FCEs, with an average of at least an A–, during Year 1.
  - The remaining courses required for the degree, with an A– average, by the end of Year 2.
- Students must provide evidence of **reading knowledge of French** or, in exceptional circumstances, of another language approved by the department.
- Students must pass a **qualifying examination** with written and oral components in the second session of Year 3 of the PhD program. The qualifying examination has two components:
  - The proficiency exam is based on a student-created and committee-approved, comprehensive list of works and entails writing exams in four (4) epochs (three for the Yiddish field), followed by an oral exam.
  - The research field paper on an approved topic approved by the examination committee offers a means to explore key theoretical readings and test firsthand the traction of at least one central methodology pertinent to the future thesis. This paper, between 25 and 30 pages in length, is completed during the Summer session following the proficiency examination and strives towards publishable quality.
- The thesis proposal encompasses an abstract, literature review, detailed discussion of the methodology, tentative chapter outlines, and bibliography/mediagraphy.
- Students must pass a **thesis proposal review** under the guidance of their supervisory committee, whose members will read the proposal and approve the examinee for doctoral candidacy.
- Students must deliver a departmental lecture on their dissertation topic within one year following the thesis proposal review.
- Students must submit the **doctoral thesis** and successfully complete the **Final Oral Examination**.
- The department may permit a candidate to write the doctoral thesis in German when the candidate's advisory committee so recommends and when the candidate has satisfied the School of Graduate Studies' conditions (see 12.1.2.8 Thesis section in Degree Regulations, Doctor of Philosophy).

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Germanic Languages and Literatures: Germanic Languages and Literatures MA and Germanic Literature, Culture and Theory PhD Courses

Not all courses are offered every year. The department should be consulted each session as to actual course offerings.

Course Code	Course Title
GER1000H	German Studies Seminar: Culture, Theory, Text
GER1050H	Methods and Texts in Yiddish Studies
GER1051Y	Yiddish Language and Literature for German Speakers
GER1200H	Middle High German
GER1210H	Medieval German Romance: Tristan und Isolde
GER1480H	Goethe's Faust
GER1485H	Goethe's Novels
GER1490H	Topics in German Literary Studies
GER1491H	The Poetics of Madness
GER1505H	Romanticism
GER1540H	Revolutions
GER1550H	Origins: Myths of Beginning in German Literature and Thought
GER1661H	Modernism in Context
GER1680H	Earth Readings

Course Code	Course Title
GER1690H	Theatre in the Weimar Republic
GER1722H	Kafka
GER1730H	Travel Writing
GER1742H	Geistesgeschichte: A History of Ideas from Kant to Freud
GER1750H	Colonialism and After in German Literature
GER1770H	Reviewing the 50s: German Cinemas under Reconstruction
GER1771H	Topics in German Cinema Studies
GER1780H	Topics in German Visual Culture
GER1785H	Remaking the Movies in German Cinemas
GER1820H	The Learning and Teaching of German
GER1860H	Introduction to Critical Theory
GER1880H	Gottfried Keller and the Politics of Poetic Realism in a Minor Key
GER2000H	Reading Course in Approved Field
GER2000Y	Reading Course in Approved Field
GER2050Y	Research Paper in Yiddish Studies
GER2051H	Topics in Yiddish or German-Jewish Studies
GER3000H	Current Trends in German and Yiddish Literature and Film
GER6000H	Reading German for Graduate Students
JGC1660H	Modernism and the Other
JGC1740H	Humans and Things
JGC1855H	Critical Theory in Context: The French-German Connection
JGF1733H	Autobiographical Documentary: History, Alterity, and Performativity

Global Affairs and Public Policy

Global Affairs and Public Policy: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Global Affairs

MGA

- Emphases:
  - Development;
  - Global Justice and Human Rights;
  - Global Policy;
  - Global Security;
  - Innovation Policy;
  - Markets;
  - The Digital World
- Dual Degree Programs:
  - MGA (University of Toronto) / MIA (Hertie School of Governance, Berlin);
  - MGA (University of Toronto) / MPA (London School of Economics, London);
  - MGA (University of Toronto) / MPP (Sciences Po, Paris)

Public Policy

MPP

- Emphases:
  - Economics for Public Policy;
  - Public and Non-Profit Management and Administration;
  - Social and Urban Policy

Combined Degree Programs

- STG, Law, JD / MGA
- STG, Law, JD / MPP
- STG, Management, MBA / MGA

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Contemporary East and Southeast Asian Studies**
  - Global Affairs, MGA
  - Public Policy, MPP
- **Environmental Studies**
  - Global Affairs, MGA
  - Public Policy, MPP
- **Ethnic, Immigration and Pluralism Studies**
  - Global Affairs, MGA
  - Public Policy, MPP
- **Public Health Policy** (admissions have been administratively suspended)
  - Global Affairs, MGA
  - Public Policy, MPP
- **Sexual Diversity Studies**
  - Public Policy, MPP

Overview

The **Master of Global Affairs (MGA)** program is a two-year professional program that equips students with a sophisticated understanding of the larger political, economic, and social contexts of global affairs and with the skills necessary to work strategically and effectively within the evolving global system. Focused on five pillars of Global Security, Global Development, Global Justice and Human Rights, Global Markets, and Innovation Policy, students will gain the tools needed to have a real-world impact.

The Munk School's prestigious **Master of Public Policy (MPP)** brings together an impressive array of students and faculty for a two-year, full-time program that bridges Canadian and global policy. In addition to a paid summer internship and a wide range of career support services, students develop core competencies considered essential for policy practice and take electives from both within the Munk School and in the broader University. Visiting public sector leaders along with a renowned multidisciplinary faculty bridge theory and real-world experience, providing contact with senior professionals in government and the broader public, private, and community sectors. Students may also apply to the combined JD/MPP degree program as well as pursue collaborative specializations with other graduate departments.

A Munk School education, located in the heart of downtown Toronto and in close proximity to an extraordinary concentration of policy leaders, will empower students to achieve their professional and personal goals.

Contact and Address

Web: munkschool.utoronto.ca/mga
Email: mga@utoronto.ca
Telephone: (416) 946-8917
Fax: (416) 946-8915

Munk School of Global Affairs and Public Policy
University of Toronto
315 Bloor Street West
Toronto, Ontario M5S 0A7 Canada

Web: munkschool.utoronto.ca/publicpolicy
Email: munkpublicpolicy@utoronto.ca
Telephone: (416) 978-5120
Fax: (416) 978-5079

Master of Public Policy Program
University of Toronto
Canadiana Gallery
Third Floor, 14 Queen's Park Crescent West
Toronto, Ontario M5S 3K9 Canada

Global Affairs and Public Policy: Graduate Faculty

Full Members

Baker, Michael - BComm, MA, PhD
Blimpo, Moussa Pouguinimpo - AM, PhD
Breznitz, Dan - BA, PhD
Breznitz, Shiri - BA, MA, PhD
Cody, Francis - PhD
Craft, Jonathan - MA, PhD
Deibert, Ronald - BA, MA, PhD
Donnelly, Michael - BA, MSS, DrRerPol
Eli, Shari - BA, PhD
Fu, Diana Xuan - BA, MPH, PhD
Garcia Montoya, Laura - MA, PhD
Hansen, Randall - BA, MPH, PhD, CRC
Heath, Joseph - BA, MA, PhD, FRSC
Kasekamp, Andres - PhD
Katz, Larissa - BA, LLB, LLM, SJD, CRC
Kemeny, Tom - BCom, MES, PhD
Lam, Tong - BSc, MA, PhD
Levi, Ron - BCL, LLB, LLM, SJD
Lipscy, Phillip - PhD
Loewen, Peter - PhD ***(Director; on leave)***
Manger, Mark - DrRerPol
Ong, Lynette - BA, AM, PhD
Ornston, Darius - BA, MA, PhD
Pauly, Louis - BA, MA, MSc, MSc, PhD, CRC, FRSC
Peng, Ito - BSW, BSc, MA, PhD
Prichard, Wilson R.S. - BA, MPH, DPhil
Robinson, John - BA, BA, MES, MES, PhD, PhD
Shachar, Ayelet - LLB, BA, LLM, SJD
Stein, Janice - BA, MA, PhD, OC, FRSC ***(Interim Director)***
Wolfe, David - BA, MA, PhD
Wong, Joseph - BA, MA, PhD, CRC
Wu, Yiching - BA, MA, MA, PhD
Zuberi, Daniyal - BA, MSc, PhD

Associate Members

Austin, Robert - BA, MA, PhD
Eidelman, Gabriel - MA, DrRerPol
Indart, Gustavo - BA, MA, PhD
Mason, Janet - BAO
Radner, James - AB, MPH
Rahr, Alexandra - BA, MA, PhD
Salardi, Paola - DPhil
Triadafilopoulos, Triadafilos - BA, MA, PhD

Global Affairs and Public Policy: Global Affairs MGA

The Master of Global Affairs (MGA) is a two-year professional program, consisting of four sessions of **coursework and a compulsory summer internship**. The purpose of this program is to provide an outstanding professional, multidisciplinary education to train the next generation of global leaders of international institutions, global civil society, and business. This program is open to applicants from all disciplinary backgrounds.

Master of Global Affairs

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Munk School of Global Affairs and Public Policy's additional admission requirements stated below.
- An appropriate bachelor's degree with a minimum standing in the final year equivalent to at least a University of Toronto B+.

Completion Requirements

This is a two-year program taken on a full-time basis over 20 consecutive months. Students must successfully complete a total of **9.0 full-course equivalents (FCEs)** as follows.

- **Year 1:**
  - 3.5 FCEs in core courses (seven half courses):
    - GLA1001H *Macroeconomics: Markets, Institutions, and Growth*.
    - GLA1003H *Global Security*.
    - GLA1010H *Microeconomics for Global Affairs*.
    - GLA1011H *Global Innovation Policy*.
    - GLA1012H *Statistics for Global Affairs*.
    - GLA1014H *Global Development*.
    - GLA1016H *Global Justice and Human Rights*.
  - 1.0 FCE in elective courses. Of these, 0.5 FCE must be chosen from the following: GLA2027H *Ethics and Global Affairs*, GLA2029H *The Sustainability Imperative: Implications for Global Affairs and Public Policy*, or GLA2034H *Decision Making and Strategic Thinking*.
  - At the end of Year 1, students must **declare an emphasis** as part of their degree program. They must complete 1.5 FCEs of coursework in order to successfully complete the emphasis; see details on the emphases below. Students who take part in an exchange are exempt from this requirement.
  - Students who elect to complete both an exchange and an emphasis may apply up to 1.0 FCE in exchange courses towards their emphasis, with approval of the director of the professional master's programs.
- **Summer** session between Years 1 and 2: GLA1007Y *Global Internship*.

- **Year 2:**
  - 1.0 FCE in core courses: GLA2000H *Capstone Seminar* and GLA2111H *Research Methods for Capstone*.
  - Additional 2.5 elective FCEs (five half courses) at the 2000 level from the Munk School. A maximum of 1.0 FCE may be taken from graduate programs outside the Munk School.

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW)
Time Limit: 3 years full-time

Global Affairs and Public Policy: Global Affairs MGA (Dual Degree: MGA / MIA Hertie School of Governance)

Dual Degree Program: Master of Global Affairs (University of Toronto) / Master of International Affairs (Hertie School of Governance)

This dual degree program creates a pathway between the U of T Master of Global Affairs and the Hertie School Master of International Affairs (MIA) programs. In Year 1, students complete MIA coursework at the Hertie School of Governance in Berlin, Germany. In the Summer session of Year 1, students complete an internship that is part of the MGA and MIA degree programs. In Year 2, students complete MGA coursework in Toronto and in the final Summer session, complete a master's thesis as part of the dual degree requirements.

Students will gain both degrees in two years (24 months) rather than the four years it would take to acquire the degrees consecutively. The pattern of registration is F/W/S/F/W/S with students completing both programs in August of Year 2. This dual degree program is open to applicants from all disciplinary backgrounds.

Contact

Master of Global Affairs / Master of International Affairs Program
Web: munkschool.utoronto.ca/mga/dual-degree-hertie-school-berlin

Master of Global Affairs Program
Munk School of Global Affairs and Public Policy, University of Toronto
Email: mga@utoronto.ca

Master of International Affairs Program
Hertie School of Governance
Email: grad-admissions@hertie-school.org

Application Process

- Applicants must apply through the Hertie School admissions website. Applicants are then jointly selected and admitted by the MGA at the University of Toronto and the MIA at the Hertie School. All applicants must complete the Hertie School online admissions application.
- All applicants who are admitted to the dual degree program must then also complete the application on U of T's School of Graduate Studies online admissions application system.

Minimum Admission Requirements

- Applicants must meet the admission requirements of both programs to be admitted to the dual degree. The MGA admission requirements are stated below.
- Applicants are admitted under the General Regulations of the School of Graduate Studies of the University of Toronto as well as the specific requirements of the MGA.
- An appropriate bachelor's degree with a standing in the final year equivalent to at least a U of T B+.
- Applicants whose primary language is not English and who graduated from a university where the primary language of instruction is not English must provide proof of English-language proficiency. The following tests and scores will be accepted:
  - Test of English as a Foreign Language (TOEFL): 100/120 overall;
  - International English Language Testing System (IELTS): 7, with at least 6.0 for each component.

Program Requirements

During their U of T registration in the MGA program, students must successfully complete a total of **7.0 full-course equivalents (FCEs)** as follows.

Year 1

- **Fall and Winter:** Students complete Year 1 courses at the Hertie School.
- **Summer:** GLA1007Y *Global Internship* (1.0 FCE, 12 weeks) plus a critical reflection paper to be submitted in September of Year 2.

Year 2

- **Fall and Winter (5.0 FCEs):**
  - GLA1011H *Global Innovation Policy* (0.5 FCE).
  - GLA1014H *Global Development* (0.5 FCE).
  - GLA2000H *Capstone Seminar* (0.5 FCE).
  - GLA2111H *Research Methods for Capstone* (0.5 FCE).
  - GLA2887H *Final Research and Analysis* (0.5 FCE).
  - 2.5 elective FCEs (five half courses) at the 2000 level within the MGA program.
- **Summer (1.0 FCE):** GLA2889Y *Dual Degree Master's Thesis* (Credit/No Credit).

Program Length

6 sessions full-time (typical registration sequence: F/W/S/F/W/S)

Global Affairs and Public Policy: Global Affairs MGA (Dual Degree: MGA / MPA London School of Economics)

Dual Degree Program: Master of Global Affairs (University of Toronto) / Master of Public Administration (London School of Economics)

This dual degree program creates a pathway between the U of T Master of Global Affairs (MGA) and the London School of Economics Master of Public Administration (MPA) programs. In Year 1, students complete MPA coursework at the London School of Economics and Political Science in the United Kingdom. In the Summer session of Year 1, students complete an internship that is part of the MGA program. In Year 2, students complete MGA coursework in Toronto and in the final Summer session, complete a policy paper as part of the dual degree requirements.

Students will gain both degrees in two years (21 months) rather than the four years it would take to acquire the degrees consecutively. The pattern of registration is F/W/S/F/W/S with students completing both programs by the end of June in Year 2. This dual degree program is open to applicants from all disciplinary backgrounds.

Contact

Master of Global Affairs / Master of Public Administration Program
munkschool.utoronto.ca/mga/dual-degree-lse-london
www.lse.ac.uk/school-of-public-policy/study/TorontoMunkDoubleDegree

Master of Global Affairs Program
Munk School of Global Affairs and Public Policy, University of Toronto
Email: mga@utoronto.ca

School of Public Policy, London School of Economics and Political Science
Email: spp.doubledegrees@lse.ac.uk

Application Process

- Applicants must apply through the London School of Economics and Political Science admissions website. Applicants are then jointly selected and admitted by the MGA at U of T and the MPA at the London School of Economics. All applicants must complete the London School of Economics online admissions application.
- All applicants who are admitted to the dual degree program must then also complete an application on the U of T School of Graduate Studies online admissions application system.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the dual degree program's additional admission requirements stated below.
- An appropriate bachelor's degree with a standing in the final year equivalent to at least a University of Toronto B+, and a cumulative standing equivalent to at least a University of Toronto mid-B.
- Applicants whose primary language is not English and who graduated from a university where the primary language of instruction is not English must provide proof of English-language proficiency. The following tests and scores will be accepted:
  - Test of English as a Foreign Language (TOEFL) Internet-Based Test (iBT): 100/120 overall;
  - International English Language Testing System (IELTS): 7, with at least 6.5 for each component.

Program Requirements

During their U of T registration in the MGA program, students must successfully complete a total of **7.0 full-course equivalents (FCEs)**.

Year 1

- **Fall and Winter:** Students complete Year 1 courses at the London School of Economics.
- **Summer (1.0 FCE):** GLA1007Y *Global Internship* (10 to 16 weeks) plus a critical reflection paper to be submitted in September of Year 2.

Year 2

- **Fall and Winter (5.0 FCEs):**
  - GLA1011H *Global Innovation Policy* (0.5 FCE).
  - GLA1016H *Global Justice and Human Rights* (0.5 FCE).
  - GLA2000H *Capstone Seminar* (0.5 FCE).
  - GLA2111H *Research Methods for Capstone* (0.5 FCE).
  - GLA2887H *Final Research and Analysis* (0.5 FCE).
  - 2.5 elective FCEs (five half courses) at the 2000 level within the MGA program.
- **Summer (1.0 FCE):**
  - GLA2890Y *Global Policy Review*.

Program Length

6 sessions full-time (typical registration sequence: F/W/S/F/W/S)

Global Affairs and Public Policy: Global Affairs MGA (Dual Degree: MGA / MPP Sciences Po)

Dual Degree Program: Master of Global Affairs (University of Toronto) / Master of Public Policy (Sciences Po)

This dual degree program creates a pathway between the U of T Master of Global Affairs (MGA) and the Sciences Po Master of Public Policy (MPP) programs. In Year 1, students complete MPP coursework at Sciences Po in Paris, France. In the Summer session of Year 1, students complete an internship that is part of the MGA degree program. In Year 2, students complete MGA coursework in Toronto and in the final Summer session, complete a Grand Oral Exam as part of the dual degree requirements.

Students will gain both degrees in two years (24 months) rather than the four years it would take to acquire the degrees consecutively. The pattern of registration is F/W/S/F/W/S with students completing both programs in August of Year 2. This dual degree program is open to applicants from all disciplinary backgrounds.

Contact

Master of Global Affairs / Master of Public Policy Program
Web: munkschool.utoronto.ca/mga/dual-degree-sciences-po-paris

Master of Global Affairs Program
Munk School of Global Affairs and Public Policy,
University of Toronto
Email: mga@utoronto.ca

Master of Public Policy Program
School of Public Affairs, Sciences Po
Email: sophie.riviereduFour@sciencespo.fr

Application Process

- Applicants must apply through the Sciences Po admissions website. Applicants are then jointly selected and admitted by the MGA at the University of Toronto and the MPP at Sciences Po. All applicants must complete the Sciences Po online admissions application.
- All applicants who are admitted to the dual degree program must then also complete the application on U of T's School of Graduate Studies online admissions application system.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies of the University of Toronto. Applicants must also satisfy the dual degree program's additional admission requirements stated below.
- An appropriate bachelor's degree with a standing in the final year equivalent to at least a U of T B+, and a cumulative standing equivalent to at least a U of T mid-B.
- Applicants whose primary language is not English and who graduated from a university where the primary language of instruction is not English must provide proof of English-language proficiency. The following tests and scores will be accepted:
  - Test of English as a Foreign Language (TOEFL): 100/120 overall;
  - International English language Testing System (IELTS): 7, with at least 6.5 for each component.
- Proof of French-language proficiency is also necessary if the French track is chosen at Sciences Po. Please consult the Sciences Po website for details.

Program Requirements

During their U of T registration in the MGA program, students must successfully complete a total of **7.0 full-course equivalents (FCEs)** as follows.

Year 1

- **Fall and Winter:** Students complete Year 1 courses at Sciences Po.
- **Summer (1.0 FCE):** GLA1007Y *Global Internship* (12 weeks) plus a critical reflection paper to be submitted in September of Year 2.

Year 2

- **Fall and Winter (5.0 FCEs):**
  - GLA1001H *Macroeconomics: Markets, Institutions, and Growth* (0.5 FCE).
  - GLA1003H *Global Security* (0.5 FCE).
  - GLA1011H *Global Innovation Policy* (0.5 FCE).
  - GLA1014H *Global Development* (0.5 FCE).
  - GLA1016H *Global Justice and Human Rights* (0.5 FCE).
  - GLA2000H *Capstone Seminar* (0.5 FCE).
  - GLA2111H *Research Methods for Capstone* (0.5 FCE).
  - GLA2887H *Final Research and Analysis* (0.5 FCE).
  - 1.0 elective FCE (two half courses) at the 2000 level, taken at the Munk School.
- **Summer (1.0 FCE):** GLA2890Y *Global Policy Review*.

Program Length

6 sessions full-time (typical registration sequence: F/W/S/F/W/S)

Global Affairs and Public Policy: Public Policy MPP

The Munk School's prestigious Master of Public Policy (MPP) brings together an impressive array of students and faculty for a two-year, full-time program that bridges Canadian and global policy.

In addition to a paid summer internship and a wide range of career support services, students develop core competencies considered essential for policy practice and take electives from both within the Munk School and in the broader University.

Visiting public sector leaders along with a renowned multidisciplinary faculty bridge theory and real-world experience, providing contact with senior professionals in government and the broader public, private, and community sectors.

Students may also apply to the combined degree program Juris Doctor (JD) / Master of Public Policy (MPP) as well as pursue collaborative specializations with other graduate departments. A Munk School education, located in the heart of downtown Toronto and in close proximity to an extraordinary concentration of policy leaders, will empower students to achieve their professional and personal goals.

Master of Public Policy

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Munk School of Global Affairs and Public Policy's additional admission requirements stated below.
- A four-year bachelor's degree (or equivalent as recognized by the University of Toronto).
- A minimum cumulative grade point average (CGPA) of a B and a minimum GPA of a B+ standing in the final year of undergraduate studies (3.3 out of a possible 4.0 grading scale). Admissions selection to the MPP program is competitive and meeting this minimum requirement does not guarantee admission. Final-year grades are based on the last 5.0 full-course equivalents (FCEs) or 10.0 half-course equivalents.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- International applicants must submit a Graduate Record Examination (GRE) (general) score.
- International applicants must also submit a translation of transcripts from non-English speaking universities.
- The Munk School offers an in-depth Math-Statistics as well as an Economics Prep course for students prior to starting Year 1 of the MPP. Details regarding the prep course are available to incoming students in the summer before Year 1. While participation is voluntary, students are encouraged to attend. All incoming students are required to complete the Math-Stats diagnostic.

Completion Requirements

Coursework. Students must successfully complete a total of **9.0 full-course equivalents (FCEs)** as follows:

- **Year 1:**
  - 3.5 required FCEs:
    - PPG1000H *Governance, Institutions, and Public Policy*.
    - PPG1002H *Microeconomics for Policy Analysis*.
    - PPG1003H *Macroeconomics for Policy Analysis*.
    - PPG1004H *Quantitative Methods for Policy Analysis*.
    - PPG1005H *The Social Context of Policy-Making*.
    - PPG1007H *Strategic Policy Implementation*.
    - PPG1008H *Program Evaluation for Public Policy*.
  - 0.5 elective FCE: either GLA2029H *The Sustainability Imperative: Implications for Global Affairs and Public Policy* or GLA2034H *Decision Making and Strategic Thinking*.
- Students must complete the Math-Stats diagnostic at the start of the Fall session. Students who do not pass PPG1002H, PPG1004H, and/or PPG1008H must retake the Math-Stats diagnostic with a grade of at least 60%.
- **Summer** session between Year 1 and Year 2, **or** during Year 2:
  - PPG2006Y *MPP Internship* (1.0 FCE). The internship research report is graded on a Credit/No Credit basis.
- **Year 2:**
  - 1.5 required FCEs:
    - PPG2000H *Politics and the Policy Process*.
    - PPG2002H *Topics in Applied Economics for Public Policy*.
    - PPG2003H *Capstone Course: Integrating Issues in Public Policy*.
  - 0.5 elective FCE: either PPG2011H *Ethics and the Public Interest* or PPG2022H *Moral Foundations of Public Policy*.
  - 0.5 elective FCE: either PPG2008H *Comparative Public Policy and Transnational Forces* or an alternate international/global focus course as approved by the MPP program.
  - 1.5 elective FCEs: one elective must be a PPG elective course; the remaining elective credits may be taken with other graduate units.

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW)
Time Limit: 3 years full-time

Global Affairs and Public Policy: Emphases

Development

Participating Programs:

- Global Affairs MGA

MGA students who wish to complete an emphasis in Development must successfully complete **1.5 full-course equivalents (FCEs)** from the following list:

GLA2002H; GLA2014H; GLA2019H; GLA2028H; GLA2060H; GLA2061H; GLA2062H; JCR1000Y.

Economics for Public Policy

Participating Programs:

- Public Policy MPP

MPP students who wish to complete the emphasis in Economics for Public Policy must successfully complete **1.5 full-course equivalents (FCEs)** from the following list:

GLA2001H, GLA2097H, PPG2010H, PPG2013H, or other approved elective courses in the area.

Global Justice and Human Rights

Participating Programs:

- Global Affairs MGA

MGA students who wish to complete an emphasis in Global Justice and Human Rights must successfully complete **1.5 full-course equivalents (FCEs)** from the following list:

GLA2013H; GLA2023H; GLA2066H; GLA2067H; GLA2068H.

Global Policy

Participating Programs:

- Global Affairs MGA

MGA students who wish to complete an emphasis in Global Policy must successfully complete **1.5 full-course equivalents (FCEs)** from the following list:

ASI4140H; ASI4900H; ERE1161H; ERE1170H; ERE1175H; ERE1998H; GLA2011H; GLA2015H; GLA2056H, GLA2096H; GLA2097H; GLA2098H.

Global Security

Participating Programs:

- Global Affairs MGA

MGA students who wish to complete an emphasis in Global Security must successfully complete **1.5 full-course equivalents (FCEs)** from the following list:

GLA2010H; GLA2024H; GLA2030H; GLA2063H; GLA2064H; GLA2065H.

Innovation Policy

Participating Programs:

- Global Affairs MGA

MGA students who wish to complete an emphasis in Innovation Policy must successfully complete **1.5 full-course equivalents (FCEs)** from the following list:

GLA2014H; GLA2018H; GLA2021H; GLA2080H; GLA2081H; GLA2082H.

Markets

Participating Programs:

- Global Affairs MGA

MGA students who wish to complete an emphasis in Markets must successfully complete **1.5 full-course equivalents (FCEs)** from the following list:

GLA2001H; GLA2006H; GLA2012H; GLA2015H; GLA2025H; GLA2037H; GLA2069H; GLA2070H; GLA2071H.

Public and Non-Profit Management and Administration

Participating Programs:

- Public Policy MPP

MPP students who wish to complete the emphasis in Public and Non-Profit Management and Administration must successfully complete **1.5 full-course equivalents (FCEs)** from the following list:

LAW7030H, PPG2001H, PPG2012H, PPG2013H, PPG2014H, PPG2015H, PPG2018H, PPG2021H, or other approved elective courses in the area.

Social and Urban Policy

Participating Programs:

- Public Policy MPP

MPP students who wish to complete the emphasis in Social and Urban Policy must successfully complete **1.5 full-course equivalents (FCEs)** from the following list:

PPG2013H, PPG2017H, PPG2021H, CHL5300H, CHL5308H, HAD5778H, LAW7030H, SWK4803H, or other approved elective courses in the area.

The Digital World

Participating Programs:

- Global Affairs MGA

MGA students who wish to complete an emphasis in The Digital World successfully complete **1.5 full-course equivalents (FCEs)** from the following list:

GLA2010H; GLA2024H; GLA2041H; GLA2042H; GLA2043H; GLA2052H.

Global Affairs and Public Policy: Global Affairs MGA Courses

Course Code	Course Title
ASI4900H	Special Topics in Contemporary Asian Studies
ERE1161H	Topics in European and Eurasian Studies
ERE1170H	Conflicts and Para-States in the European Union's Backyard
ERE1175H	One Hundred Years of Cultures of Refugees in Europe, 1920-2020
ERE1998H	Reading and Research I
GLA1001H	Macroeconomics: Markets, Institutions, and Growth
GLA1003H	Global Security
GLA1007Y	Global Internship
GLA1010H	Microeconomics for Global Affairs
GLA1011H	Global Innovation Policy
GLA1012H	Statistics for Global Affairs
GLA1014H	Global Development
GLA1016H	Global Justice and Human Rights
GLA2000H	Capstone Seminar
GLA2001H	Global Capital Markets and Global Strategies
GLA2002H	Issues in Development Policy and Practice
GLA2006H	The Global Political Economy of Finance and Investment
GLA2007H	Global Affairs Externship
GLA2010H	Citizen Lab Intensive Seminar
GLA2111H	Research Methods for Capstone
GLA2012H	The Global Political Economy of Trade
GLA2013H	Topics in Global Violence
GLA2014H	Innovation and Economic Development
GLA2015H	The Political Economy of the Welfare State
GLA2018H	Innovation and the City
GLA2019H	The Political Economy of Development
GLA2021H	Innovation, Institutions, Governments, and Growth
GLA2023H	Justice Reforms in Global Context
GLA2024H	Intelligence and Cybersecurity in Global Politics
GLA2025H	Global Affairs Lab
GLA2027H	Ethics and Global Affairs
GLA2029H	The Sustainability Imperative: Implications for Global Affairs and Public Policy
GLA2030H	Grand Strategy and Global Threats
GLA2034H	Decision Making and Strategic Thinking
GLA2035H	International Legal Challenges
GLA2036H	Bilateral Diplomacy: Canada-Japan and US-Japan Relations
GLA2037H	Financial Management for Global Organizations
GLA2041H	Topics in the Digital World I
GLA2042H	Topics in the Digital World II
GLA2043H	Topics in the Digital World III
GLA2044H	Topics in Global Policy and Asia I
GLA2045H	Topics in Global Policy and Asia II
GLA2046H	Topics in Global Policy and Asia III
GLA2050H	Selected Topics in International Studies
GLA2052H	The Digital Platform Economy
GLA2056H	The Populist Radical Right
GLA2060H	Topics in Development I
GLA2061H	Topics in Development II
GLA2062H	Topics in Development III
GLA2063H	Topics in Security I
GLA2064H	Topics in Security II
GLA2065H	Topics in Security III
GLA2066H	Topics in Justice I
GLA2067H	Topics in Justice II
GLA2068H	Topics in Justice III
GLA2069H	Topics in Markets I

Course Code	Course Title
GLA2070H	Topics in Markets II
GLA2071H	Topics in Markets III
GLA2080H	Topics in Innovation I
GLA2081H	Topics in Innovation II
GLA2082H	Topics in Innovation III
GLA2090H	Topics in Global Affairs I
GLA2091H	Topics in Global Affairs II
GLA2092H	Topics in Global Affairs III
GLA2093H	Topics in Global Affairs IV
GLA2095H	MGA Reading Course
GLA2096H	Topics in Global Policy I
GLA2097H	Topics in Global Policy II
GLA2098H	Topics in Global Policy III
GLA2887H	Final Research and Analysis
GLA2888H	MGA Research Paper
GLA2889Y	Dual Degree Master's Thesis
GLA2890Y	Global Policy Review
JCR1000Y	An Interdisciplinary Approach to Addressing Global Challenges
JSE1708H	Sustainability and the Western Mind

Global Affairs and Public Policy: Public Policy MPP Courses

Required Courses

Course Code	Course Title
GLA2029H	The Sustainability Imperative: Implications for Global Affairs and Public Policy
GLA2034H	Decision Making and Strategic Thinking
GLA2068H	Topics in Justice III
LAW7030H	Issues in Aboriginal Law and Policy
PPG1000H	Governance, Institutions, and Public Policy
PPG1002H	Microeconomics for Policy Analysis
PPG1003H	Macroeconomics for Policy Analysis
PPG1004H	Quantitative Methods for Policy Analysis
PPG1005H	The Social Context of Policy-Making

Course Code	Course Title
PPG1007H	Strategic Policy Implementation
PPG1008H	Program Evaluation for Public Policy
PPG2000H	Politics and the Policy Process
PPG2001H	Legal Analysis of Public Policy
PPG2002H	Topics in Applied Economics for Public Policy
PPG2003H	Capstone Course: Integrating Issues in Public Policy
PPG2006Y	MPP Internship
PPG2008H	Comparative Public Policy and Transnational Forces
PPG2009H	Urban Policy
PPG2010H	Panel Data Methods for Public Policy Analysis
PPG2011H	Ethics and the Public Interest
PPG2012H	Topics in Public Policy
PPG2013H	Topics in Public Policy I
PPG2014H	Topics in Public Policy II
PPG2015H	Topics in Public Policy III
PPG2016H	Topics in Public Policy IV
PPG2017H	Topics in Public Policy V
PPG2018H	The Role of Government
PPG2021H	Priority Topics in Public Administration
PPG2022H	Moral Foundations of Public Policy

Health Policy, Management and Evaluation

HPME: Introduction

Faculty Affiliation

Public Health

Degree Programs

Health Policy, Management and Evaluation

MSc

- Concentrations:
  - Clinical Epidemiology and Health Care Research;
  - Health Systems Leadership and Innovation;
  - Health Systems Research
    - Emphases:
      - Health Economics;
      - Health Informatics Research;
      - Health Policy;
      - Health Systems Artificial Intelligence;
      - Health Technology Assessment;
      - Organization and Management Studies;
      - Outcomes and Evaluation Studies
  - Quality Improvement and Patient Safety.

PhD

- Concentrations:
  - Clinical Epidemiology and Health Care Research;
  - Health Professions Education Research;
  - Health Systems Research
    - Emphases:
      - Health Economics;
      - Health Informatics Research;
      - Health Policy;
      - Health Technology Assessment;
      - Organization and Management Studies;
      - Outcomes and Evaluation Studies.

Health Administration

MHSc

Health Informatics

MHI

Combined Degree Programs

STG, Health Administration, MHSc / MSW (admissions have closed)

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Aging, Palliative and Supportive Care Across the Life Course**
  - Health Administration, MHSc
  - Health Policy, Management and Evaluation, MSc, PhD
- **Bioethics** (admissions have been administratively suspended)
  - Health Administration, MHSc
  - Health Policy, Management and Evaluation, MSc, PhD
- **Global Health (U of T Global Scholar)**
  - Health Policy, Management and Evaluation, MSc (thesis only), PhD
- **Health Services and Policy Research** (admissions have been administratively suspended)
  - Health Policy, Management and Evaluation, MSc, PhD
- **Public Health Policy** (admissions have been administratively suspended)
  - Health Administration, MHSc
  - Health Policy, Management and Evaluation, MSc, PhD
- **Resuscitation Sciences** (admissions have been administratively suspended)
  - Health Policy, Management and Evaluation, MSc, PhD
- **Women and Gender Studies**
  - Health Administration, MHSc
  - Health Policy, Management and Evaluation, MSc, PhD
- **Women's Health**
  - Health Policy, Management and Evaluation, MSc, PhD

Overview

The Institute of Health Policy, Management and Evaluation (IHPME) brings together researchers from a wide range of disciplinary backgrounds. Broad research themes include Clinical Epidemiology and Health Care Research; Health Systems Research including Health Informatics Research, Health Economics, Health Policy, Health Services Organization and Management Studies, Health Services Outcomes and Evaluation, Health Technology Assessment, and Knowledge Translation; Health Administration; Health Systems Leadership and Innovation; and Quality Improvement and Patient Safety. More than 400 faculty members from a variety of disciplines are represented in IHPME. At least 130 senior health care executives serve as adjunct faculty.

Please note the **application deadlines.**

November 15

- MSc in Health Policy, Management and Evaluation concentrations: Clinical Epidemiology and Health Care Research; Health Systems Research
- PhD in Health Policy, Management and Evaluation concentrations: Clinical Epidemiology and Health Care Research; Health Professions Education Research; Health Systems Research

November 30

- MSc in Health Policy, Management and Evaluation concentration: Quality Improvement and Patient Safety

January 15

- MSc in Health Policy, Management and Evaluation concentration: Health Systems Leadership and Innovation (Undergraduate Medical students and physicians [trainees and practicing physicians])

February 1

- Master of Health Informatics
- MHSc in Health Administration

March 1

- Master of Health Informatics (executive option)

Contact and Address

Web: ihpme.utoronto.ca/community/connect
Email: ihpme@utoronto.ca
Telephone: (416) 978-4326
Fax: (416) 978-7350

Institute of Health Policy, Management and Evaluation
University of Toronto
4th Floor, 155 College Street
Toronto, Ontario M5T 3M6 Canada

HPME: Graduate Faculty

Full Members

Abrahamyan, Lusine - MPH, MD, PhD
Anderson, Geoff - MD
Baker, G. Ross - AB, MA, PhD
Baxter, Nancy - DrMed, PhD
Bayoumi, Ahmed - MSc, MD
Berta, Whitney - BS, MBA, PhD
Birken, Catherine - MSc, MD
Booth, Gillian - MD
Bronskill, Susan - MSc
Brown, Adalsteinn - AB, PhD ***(Dean)***
Brown, Hilary Kathryn - BA, MSc, PhD
Cockerill, Rhonda W. - BA, MA, PhD
Cohen, Eyal - MSc, MD
Colantonio, Angela - BA, BSc(OT), MHSc, PhD
Coyte, Peter C. - BA, MA, PhD
Deber, Raisa - BS, MS, PhD
Detsky, Allan - BS, MD, PhD
Dobrow, Mark - PhD
Feldman, Brian - MD
Gagliardi, Anna - BSc, BE, MSc, MLS, PhD
Gershon, Andrea - MSc, MD
Gibson, Jennifer - PhD
Guttmann, Astrid - BA, AB, MSc, MSc, MDCM
Hansen, Bettina Elisabeth - MSc, PhD
Hogg-Johnson, Sheilah - BMath, MMath, PhD
Ko, Dennis - MD
Krzyzanowska, Monika - MPH, MD
Kulkarni, Abhaya - BSc, MD, PhD
Laporte, Audrey - BA, MA, PhD ***(Director until December 31, 2024)***
Loutfy, Mona - MPH, MD
Marchildon, Gregory - PhD
McCrindle, Brian - MD
Miller, Fiona - BIS, MA, DPhil
Moulton, Carol-Anne - MSc, DrMed
Mylopoulos, Maria - BS, MA, PhD
Nauenberg, Eric - AB, MPH, PhD
Naylor, C. David - MD, PhD
O'Sullivan, Julia - BA, MA, PhD
Parekh, Rulan - MD
Ratnapalan, Savithiri - MBBS, MEd
Redelmeier, Donald - MS, MD
Rochon, Paula - MD
Sale, Joanna
Sander, Beate - PhD
Saunders, Natasha - MD, MPH, MS
Seto, Emily - PhD
Shachak, Aviv - PhD ***(Graduate Coordinator)***
Stabile, Mark - BA, MA, PhD, PhD
Stinson, Jennifer - BScN, MSc, PhD
Straus, Sharon Elizabeth - MSc, MD
Stukel, Therese - BS, PhD
Sutradhar, Rinku - BSc, MMath, PhD
Tavares, Walter - BSc, MSc, PhD
Trbovich, Patricia L. - BA, MA, PhD, PhD
Tricco, Andrea - MSc, PhD
Ungar, Wendy - BA, MSc, PhD
Wei, Xiaolin - MD, MPH, PhD
Whitehead, Cynthia - AB, MD, MHSc, PhD
Widdifield, Jessica - BSc, PhD
Wijeysundera, Duminda - MD, MSc
Wiljer, David - PhD
Wodchis, Walter - MA, PhD

Associate Members

Abbey, Susan - BSc, MD
Abdel-Qadir, Husam Mohamed - MD, PhD
Adhikari, Neill - MDCM
Alba, Ana Carolina - DrMed, PhD
Amir, Eitan - MBChB
Axler, Renata - BA, MA, PhD
Azarpazhooh, Amir - MSc, DDS, PhD
Bains, Jatinder - MHSc
Barnett Tapia, Carolina - DrMed
Berger, Ken - JD, MD
Bethell, Jennifer Margaret - PhD

Bezjak, Andrea - MS, MDCM
Bhat, Mamatha - MMed, MD
Bhatia, Anuj - MBBS
Bingham, Kathleen - BSc, MD, PhD
Blackstien-Hirsch, Paula - MHSA, MHSA, MHSc
Borkhoff, Cornelia - BSc, MSc, PhD
Buchan, Sarah A.W. - MSc, PhD
Cammisa, Giuseppe - MBA
Chadi, Ahmed - BS, MS, MD
Chan, Ben - BSc, MPH, MPA, MD
Chan, Vincy - DPhil
Chartier, Lucas - DrMed
Chiu, Maria - BE, BA, MSc, PhD
Covelli, Andrea - BS, MD, PhD
Craven, Beverley Catharine - MD
Denburg, Avram Ezra - MD
Desveaux, Laura - PhD
Dubinsky, Isser - BSc, MD, MD
Esensoy, Ali - PhD
Eskander, Antoine - MSc, MD
Evans, Jenna - PhD
Fralick, Michael - MD, PhD
Gaudette, Etienne - PhD
Gien, Lilian - BSc, MHPE, MD
Ginzburg, Amir - BSc, MD
Gomez Jaramillo, David - MD, PhD
Grewal, Keerat - MSc, MSc, MD
Guerriere, Denise - PhD
Hall, Justin - MBA, MPH, MSc, MD
Hameed, Usmaan - BS, MD
Hayeems, Robin - DPH
Hoang-Kim, Amy - PhD
Holloway, Kelly J. - PhD
Irish, Jonathan - MSc, MD
Kaster, Tyler - BSc, MD, PhD
Kiss, Alexander - PhD
Klein, David - MD
Lalloo, Chitra - PhD
Liu, Kuan - BSc, MMath, PhD
Lo, Alexander - BSc, MD
Lok, Charmaine - MSc, MD
Lotfollahi Shabestari, Omid - MD, PhD
Luo, Zhong-Cheng - BM, MMed, PhD
Maetzel, Andreas - MSc, PhD
Manlhiot, Cedric - BS, PhD
McCredie, Victoria - MBChB, DPhil
Munce, Sarah - BSc, MSc, PhD
Munshi, Laveena - MSc, DrMed
Nelson, Michelle - BA, MA, PhD
Paprica, Alison - DSc
Paterson, Michael - MS
Perreira, Tyrone - BPHE, MEd, PhD
Perruccio, Anthony - BSc, MHSc, PhD
Piggott, Katrina - MD, MD
Pitzul, Kristen - PhD
Quinn, Kieran - MD
Roza da Costa, Bruno Cezar - PhD
Rueda, Sergio - MSc, AM, PhD
Schull, Michael - MD
Sejdic, Ervin - PhD, PhD
Shakeri Hossein Abad, Zahra - PhD
Shankardass, Ketan - BSc, MHSc, PhD
Shea, Christine - PhD
Sinclair, Douglas - BSc, MD
Smith, Tina - BSc, MHSc
Sriharan, Abi - BSc, MSc, PhD, PhD
Stergiopoulos, Vicky - MHSc, MD
Stricker Naimer, Michelle - BS, MHSc, DrMed
Tan, Darrell - BSc, MD, PhD
Targownik, Laura - MD
Teare, Gary - MSc, DrMedVet, PhD
Vyas, Manav - MBBS, MSc, PhD
Waddell, Andrea - MD
Wald, Ron - MPH, MDCM
Watt, Jennifer - MD, MD
Wickens, Christine - BSc, MA, PhD
Wilson, Jefferson - BS, MD, PhD
Wolfstadt, Jesse - BS, MS, MD
Wright, Sarah Robin - PhD
Zakaria, Nur Camellia - BSc, PhD
Zywiel, Michael - BS, MS, MD

HPME: Health Policy, Management and Evaluation MSc

The HPME graduate program offers the following concentrations leading to the MSc degree:

- Clinical Epidemiology and Health Care Research;
- Health Systems Leadership and Innovation;
- Health Systems Research; and
- Quality Improvement and Patient Safety.

The MSc program can be taken on a full-time or part-time basis.

HPME: Health Policy, Management and Evaluation MSc; Concentration: Clinical Epidemiology and Health Care Research

Master of Science; Concentration: Clinical Epidemiology and Health Care Research (Thesis Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy IHPME's additional admission requirements stated below.
- Applicants require an overall B+ average or higher in the last two years of an appropriate bachelor's degree from a recognized university. For applicants to this concentration, a degree in a health profession (for example, MD, BScN, BScOT, BScPT, DDM, MScN) from a recognized university with a B+ average in the final two years is required.

Completion Requirements

- Completion of **3.0 full-course equivalents (FCEs)** as follows:

    - 1.5 FCEs required: HAD5301H, HAD5307H, and one of HAD5303H, HAD5304H, HAD5306H, or HAD5309H
    - 1.5 FCEs in electives.
- A **thesis** written under the supervision of a thesis committee (supervisor and at least one, and preferably two, additional graduate faculty members) and its defence before an examination committee.
- Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis. See the CR/NCR-eligible courses in the course list section.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

HPME MSc; Concentration: Clinical Epidemiology and Health Care Research (Coursework Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy IHPME's additional admission requirements stated below.
- Applicants require an overall B+ average or higher in the last two years of an appropriate bachelor's degree from a recognized university. For applicants to this concentration, a degree in a health profession (for example, MD, BScN, BScOT, BScPT, DDM, MScN) from a recognized university with a B+ average in the final two years is required.

Completion Requirements

- Completion of **5.0 FCEs** as follows, including at least one research practicum:
    - 2.0 FCEs required: HAD5301H, HAD5307H, HAD6360H, and one of HAD5303H, HAD5304H, or HAD5309H
    - 3.0 FCEs in electives.
- Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis. See the CR/NCR-eligible courses in the course list section.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

HPME: Health Policy, Management and Evaluation MSc; Concentration: Health Systems Leadership and Innovation

The concentration in Health Systems Leadership and Innovation consists of coursework only. Students begin this concentration in the Summer session.

Master of Science; Concentration: Health Systems Leadership and Innovation

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy IHPME's additional admission requirements stated below.
- Applicants require an overall B+ average or higher in the last two years of an appropriate bachelor's degree from a recognized university.
- Applicants must have health-care experience and demonstrate aptitude for innovation and health systems.
- Preference will be given to medical trainees in a Canadian Faculty of Medicine or to early-career physicians. Undergraduate medical trainees who are accepted must register part-time; post-graduate medical education trainees who are accepted may register full-time or part-time.

Completion Requirements

- Completion of **5.0 full-course equivalents (FCEs)** as follows:
    - 2.5 required FCEs: HAD2001H, HAD2006H, HAD2007H, HAD2012H, and either HAD2009H or HAD2013H.
    - 1.0 required FCE in experiential learning: HAD2040Y.
    - 1.5 elective FCEs; please consult with the department about electives.
    - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis. See the CR/NCR-eligible courses in the course list section.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: S-FW); 7 sessions part-time (typical registration sequence: S-FWS-FWS)
Time Limit: 3 years full-time; 6 years part-time

HPME: Health Policy, Management and Evaluation MSc; Concentration: Health Systems Research

Master of Science; Concentration: Health Systems Research (Thesis Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy IHPME's additional admission requirements stated below.
- Applicants require an overall B+ average or higher in the last two years of an appropriate bachelor's degree from a recognized university. For applicants to Clinical Epidemiology and Health Care Research, a degree in a health profession (for example, MD, BScN, BScOT, BScPT, DDM, MScN) from a recognized university with a B+ average in the final two years is required.

Completion Requirements

- Completion of **3.0 full-course equivalents (FCEs)** as follows:
  - 1.0 FCE in research methodology courses
  - 1.0 FCE in health systems research courses:
    - HAD5011H *Canada's Health System and Health Policy*
    - 0.5 FCE from other health systems research courses
  - 1.0 FCE in electives.
- A **thesis** written under the supervision of a thesis committee and its defence before an examination committee.
- Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis. See the CR/NCR-eligible courses in the course list section.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

HPME MSc; Concentration: Health Systems Research (Coursework Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy IHPME's additional admission requirements stated below.
- Applicants require an overall B+ average or higher in the last two years of an appropriate bachelor's degree from a recognized university. For applicants to Clinical Epidemiology and Health Care Research, a degree in a health profession (for example, MD, BScN, BScOT, BScPT, DDM, MScN) from a recognized university with a B+ average in the final two years is required.

Completion Requirements

- Completion of **5.0 full-course equivalents (FCEs)** as follows:
  - 1.0 FCE in health systems research courses, normally from HAD5011H, HAD5727H, HAD5756H, or HAD5773H
  - 1.0 FCE in research methodology courses, normally from HSR1001H, HAD5772H, HAD5740H, HAD5742H, HAD5744H, HAD5746H, HAD5779H, or HAD5781H
  - 3.0 FCEs in electives, normally from HAD5726H, HAD5728H, HAD5730H, HAD5737H, HAD5738H, HAD5743H, HAD5744H, HAD5760H, HAD5763H, HAD5771H, HAD5778H, or HAD6750H.
  - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis. See the CR/NCR-eligible courses in the course list section.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

HPME: Health Policy, Management and Evaluation MSc; Concentration: Quality Improvement and Patient Safety

Master of Science; Concentration: Quality Improvement and Patient Safety (Thesis Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy IHPME's additional admission requirements stated below.
- Applicants require an overall B+ average or higher in the last two years of an appropriate bachelor's degree from a recognized university.

Completion Requirements

- Completion of **3.0 FCEs** as follows:
  - 2.5 FCEs required: HAD3010H, HAD3020H, HAD3041Y, HAD3050H
  - 0.5 FCE in electives.

- A **thesis** written under the supervision of a thesis committee (comprising the supervisor and at least one additional graduate faculty member, preferably two) and its defence before an examination committee.
- Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis. See the CR/NCR-eligible courses in the course list section.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

HPME MSc; Concentration: Quality Improvement and Patient Safety (Coursework Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy IHPME's additional admission requirements stated below.
- Applicants require an overall B+ average or higher in the last two years of an appropriate bachelor's degree from a recognized university.

Completion Requirements

- Completion of **5.0 FCEs** as follows, including completion of at least one research practicum:
  - 3.0 required FCEs (HAD3010H, HAD3020H, HAD3030H, HAD3050H, HAD3060H, HAD3070H)
  - 1.0 required FCE in a research project practicum (HAD3040Y)
  - 1.0 FCE in electives.
- Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis. See the CR/NCR-eligible courses in the course list section.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

HPME: Health Policy, Management and Evaluation PhD

The HPME graduate program offers three concentrations leading to the PhD degree: 1) Clinical Epidemiology and Health Care Research; 2) Health Professions Education Research; and 3) Health Systems Research.

Applicants may enter the PhD program via one of two routes: 1) following completion of an MA or MSc degree; 2) transfer from the University of Toronto MSc transfer program.

The PhD program can be taken on a full-time or flexible-time basis. Some applicants may be admitted to a flexible-time PhD option with approval of the Graduate Chair. The flexible-time PhD option benefits mature students with career and/or familial obligations. The degree requirements for the flexible-time PhD option are identical to those listed for the full-time PhD option.

HPME: Health Policy, Management and Evaluation PhD; Concentration: Clinical Epidemiology and Health Care Research

PhD Program; Concentration: Clinical Epidemiology and Health Care Research (Full-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the IHPME's additional admission requirements stated below.
- Applicants to this concentration must have a degree in a health profession (for example, MD, BScN, BScOT, BScPT, DDM, MScN, or equivalent).
- Satisfactory references pertaining to the applicant's academic and research abilities.
- Outstanding students with a non-thesis master's degree may be admitted to the full-time PhD upon the recommendation of the appropriate IHPME committee, if the applicant has the appropriate background preparation and research experience or publications which can be considered equivalent to a master's thesis.

Completion Requirements

- Completion of a **comprehensive course**.
- Completion of **5.0 full-course equivalents (FCEs)**, which must include:
  - 2.0 FCEs in compulsory courses:
    - HAD5301H *Introduction to Clinical Epidemiology and Health Care Research*
    - HAD5307H *Introduction to Applied Biostatistics*
    - HAD5311H *Comprehensive/Synthesis* (one year)
    - HAD5316H *Biostatistics II: Advanced Techniques in Applied Regression Methods*
  - 2.0 recommended FCEs from the following Clinical Epidemiology and Health Care Research courses:
    - HAD5302H *Measurement in Clinical Research*
    - HAD5303H *Controlled Clinical Trials*
    - HAD5304H *Clinical Decision Making and Cost Effectiveness*
    - HAD5305H *Evidence-Based Guidelines*
    - HAD5306H *Introduction to Health Services Research and the Use of Health Administrative Data*

        - HAD5308H *Evidence Synthesis: Systematic Reviews and Meta-Analysis*
        - HAD5309H *Observational Studies: Theory, Design, and Methods*
        - HAD5310H *Pragmatic Issues in Conduct of Controlled Trials*
        - HAD5730H *Economic Evaluation Methods for Health Systems Research*
        - HAD5760H *Advanced Health Economics and Policy Analysis*.
- Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis. See the CR/NCR-eligible courses in the course list section.
- Writing of a **PhD thesis** under the supervision of an approved thesis committee (supervisor plus at least two additional graduate faculty members).
- **Oral defence** of the thesis before an examination committee.

Mode of Delivery: In person
Program Length: 4 years full-time
Time Limit: 6 years full-time

PhD Program; Concentration: Clinical Epidemiology and Health Care Research (Transfer)

Transfer Requirements

- To be considered for admission to the PhD transfer option, applicants must be admitted to the MSc program in Health Policy, Management and Evaluation in the Clinical Epidemiology and Health Care Research concentration.
- Within 24 months of registration in the MSc program, applicants must notify the CEHCR Program Director of their interest in applying to transfer to the PhD program.
- Transfer to the PhD program is contingent upon successful completion of sufficient master's coursework (normally, 2.5 full-course equivalents [FCEs]), and the preparation and defence of a PhD thesis proposal.

Completion Requirements

- Completion of a **comprehensive course**.
- Completion of **5.0 full-course equivalents (FCEs)**, which must include:
    - 2.0 FCEs in compulsory courses:
        - HAD5301H *Introduction to Clinical Epidemiology and Health Care Research*
        - HAD5307H *Introduction to Applied Biostatistics*
        - HAD5311H *Comprehensive/Synthesis* (one year)
        - HAD5316H *Biostatistics II: Advanced Techniques in Applied Regression Methods*
    - 2.0 recommended FCEs from the following Clinical Epidemiology and Health Care Research courses:
        - HAD5302H *Measurement in Clinical Research*
        - HAD5303H *Controlled Clinical Trials*
        - HAD5304H *Clinical Decision Making and Cost Effectiveness*
        - HAD5305H *Evidence-Based Guidelines*
        - HAD5306H *Introduction to Health Services Research and the Use of Health Administrative Data*
        - HAD5308H *Evidence Synthesis: Systematic Reviews and Meta-Analysis*
        - HAD5309H *Observational Studies: Theory, Design, and Methods*
        - HAD5310H *Pragmatic Issues in Conduct of Controlled Trials*
        - HAD5730H *Economic Evaluation Methods for Health Systems Research*
        - HAD5760H *Advanced Health Economics and Policy Analysis*.
- Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis. See the CR/NCR-eligible courses in the course list section.
- Writing of a **PhD thesis** under the supervision of an approved thesis committee (supervisor plus at least two additional graduate faculty members).
- **Oral defence** of the thesis before an examination committee.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program; Concentration: Clinical Epidemiology and Health Care Research (Flexible-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the IHPME's additional admission requirements stated below.
- Applicants to this concentration must have a degree in a health profession (for example, MD, BScN, BScOT, BScPT, DDM, MScN, or equivalent).
- Satisfactory references pertaining to the applicant's academic and research abilities.
- Outstanding students with a non-thesis master's degree may be admitted to the flexible-time PhD upon the recommendation of the appropriate IHPME committee, if the applicant has the appropriate background preparation and research experience or publications which can be considered equivalent to a master's thesis.

Completion Requirements

- Students must register full-time for the first four years of their program (Fall, Spring, Summer sessions); thereafter, they may register part-time.
- Completion of a **comprehensive course**.
- Completion of **5.0 full-course equivalents (FCEs),** which must include:
    - 2.0 FCEs in compulsory courses:

        - HAD5301H *Introduction to Clinical Epidemiology and Health Care Research*
        - HAD5307H *Introduction to Applied Biostatistics*
        - HAD5311H *Comprehensive/Synthesis* (one year)
        - HAD5316H *Biostatistics II: Advanced Techniques in Applied Regression Methods*
    - 2.0 recommended FCEs from the following Clinical Epidemiology and Health Care Research courses:
        - HAD5302H *Measurement in Clinical Research*
        - HAD5303H *Controlled Clinical Trials*
        - HAD5304H *Clinical Decision Making and Cost Effectiveness*
        - HAD5305H *Evidence-Based Guidelines*
        - HAD5306H *Introduction to Health Services Research and the Use of Health Administrative Data*
        - HAD5308H *Evidence Synthesis: Systematic Reviews and Meta-Analysis*
        - HAD5309H *Observational Studies: Theory, Design, and Methods*
        - HAD5310H *Pragmatic Issues in Conduct of Controlled Trials*
        - HAD5730H *Economic Evaluation Methods for Health Systems Research*
        - HAD5760H *Advanced Health Economics and Policy Analysis*.
- Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis. See the CR/NCR-eligible courses in the course list section.
- Writing of a **PhD thesis** under the supervision of an approved thesis committee (supervisor plus at least two additional graduate faculty members).
- **Oral defence** of the thesis before an examination committee.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

HPME: Health Policy, Management and Evaluation PhD; Concentration: Health Professions Education Research

PhD Program; Concentration: Health Professions Education Research (Full-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the IHPME's additional admission requirements stated below.
- A master's degree (MA or MSc) requiring a thesis with a B+ average or higher.
- Satisfactory references pertaining to the applicant's academic and research abilities.
- Outstanding students with a non-thesis master's degree may be admitted to the full-time PhD upon the recommendation of the appropriate IHPME committee, if the applicant has the appropriate background preparation and research experience or publications which can be considered equivalent to a master's thesis.

Completion Requirements

- Completion of a **comprehensive course**.
- Completion of **5.0 full-course equivalents (FCEs)**, which must include:
    - 2.5 FCEs in compulsory courses:
        - HAD5011H *Canada's Health System and Health Policy*
        - HAD6500H *Essential Skills in HPER*
        - HAD6501H *Introduction to Methods/Methodologies for HPER*
        - HAD6502H *Survey of Critical and Interpretive Social Science Theory for HPER* **or** HAD6503H *Survey of Cognitive and Behavioural Sciences Theory for Health Professions Education Research*
        - HAD6504H *Intermediate Critical and Interpretive Social Science Methods* **or** HAD6505H *Intermediate Cognitive and Behavioural Sciences Methods/Methodologies for Health Professions Education Research*
    - 0.5 FCE: HAD6560H *Health Professions Education Research (HPER) Comprehensive Exam*.
    - 2.0 recommended FCEs from the following Health Professions Education Research concentration courses:
        - HAD6506H *Assessment in Health Professions Education*
        - HAD6507H *Identity and Professional Life for Health Professions Education Research*
        - HAD6508H *Sociology of the Professions*
        - HAD6509H *The Examination: The Technology that Shapes What We Can Know, Do, and Be*
        - HAD6510H *Academic Medicine: From the Global to the Virtual*
        - HAD6560H *Health Professions Education Research (HPER) Comprehensive Exam*.
- Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis. See the CR/NCR-eligible courses in the course list section.
- Writing of a **PhD thesis** under the supervision of an approved thesis committee (supervisor plus at least two additional graduate faculty members).
- **Oral defence** of the thesis before an examination committee.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program; Concentration: Health Professions Education Research (Flexible-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the IHPME's additional admission requirements stated below.
- A master's degree (MA or MSc) requiring a thesis with a B+ average or higher.
- Satisfactory references pertaining to the applicant's academic and research abilities.
- Outstanding students with a non-thesis master's degree may be admitted to the flexible-time PhD upon the recommendation of the appropriate IHPME committee, if the applicant has the appropriate background preparation and research experience or publications which can be considered equivalent to a master's thesis.

Completion Requirements

- Students must register full-time for the first four years of their program (Fall, Spring, Summer sessions); thereafter, they may register part-time.
- Completion of a **comprehensive course**.
- Completion of **5.0 full-course equivalents (FCEs)**, which must include:
  - 2.5 FCEs in compulsory courses:
    - HAD5011H *Canada's Health System and Health Policy*
    - HAD6500H *Essential Skills in HPER*
    - HAD6501H *Introduction to Methods/Methodologies for HPER*
    - HAD6502H *Survey of Critical and Interpretive Social Science Theory for HPER* **or** HAD6503H *Survey of Cognitive and Behavioural Sciences Theory for Health Professions Education Research*
    - HAD6504H *Intermediate Critical and Interpretive Social Science Methods* **or** HAD6505H *Intermediate Cognitive and Behavioural Sciences Methods/Methodologies for Health Professions Education Research*
  - 0.5 FCE: HAD6560H *Health Professions Education Research (HPER) Comprehensive Exam*.
  - 2.0 recommended FCEs from the following Health Professions Education Research concentration courses:
    - HAD6506H *Assessment in Health Professions Education*
    - HAD6507H *Identity and Professional Life for Health Professions Education Research*
    - HAD6508H *Sociology of the Professions*
    - HAD6509H *The Examination: The Technology that Shapes What We Can Know, Do, and Be*
    - HAD6510H *Academic Medicine: From the Global to the Virtual*
    - HAD6560H *Health Professions Education Research (HPER) Comprehensive Exam*.
- Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis. See the CR/NCR-eligible courses in the course list section.
- Writing of a **PhD thesis** under the supervision of an approved thesis committee (supervisor plus at least two additional graduate faculty members).
- **Oral defence** of the thesis before an examination committee.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

HPME: Health Policy, Management and Evaluation PhD; Concentration: Health Systems Research

PhD Program; Concentration: Health Systems Research (Full-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the IHPME's additional admission requirements stated below.
- A master's degree (MA or MSc) requiring a thesis with a B+ average or higher.
- Satisfactory references pertaining to the applicant's academic and research abilities.
- Outstanding students with a non-thesis master's degree may be admitted to the PhD upon the recommendation of the appropriate IHPME committee, if the applicant has the appropriate background preparation and research experience or publications which can be considered equivalent to a master's thesis.

Completion Requirements

- Students must select **one of six emphases** and complete the required emphasis courses listed below.
- Completion of **5.0 full-course equivalents (FCEs)** including:
  - A comprehensive course (0.5 FCE) specified as part of the requirements for each emphasis below.
  - 2.0 FCEs as follows:
    - HAD5011H *Canada's Health Care System and Health Policy (Doctoral Stream)*
    - HAD5772H *Intermediate Statistics for Health Systems Researchers* (or equivalent if specified in the selected emphasis)
    - HAD6760H *Introduction to Health Services and Systems Research Theory and Methods*
    - HAD6770H *Applying Health Services and Systems Research Methods*.

- Writing of a **PhD thesis** under the supervision of an approved thesis committee (supervisor plus at least two additional graduate faculty members).
- **Oral defence** of the thesis before an examination committee.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program; Concentration: Health Systems Research (Transfer)

Transfer Requirements

- To be considered for admission to the PhD transfer option, applicants must be admitted to the MSc program in Health Policy, Management and Evaluation.
- At the time of application to the MSc program, applicants must indicate in their Letter of Intent their interest in applying to transfer to the PhD program.
- Transfer to the PhD program is contingent upon:
  - Successful completion of a minimum 2.5 full-course equivalents (FCEs) of master's coursework.
  - Achieving a minimum grade of B+ in all courses and an overall average of A– in their program.
  - Obtaining a letter of support from the applicant's supervisor.
  - The preparation and defence of a PhD-quality thesis proposal.

Completion Requirements

- Once students have successfully transferred to the PhD program, they must study under **one of six emphases** and complete the required emphasis courses listed below.
- Completion of **5.0 full-course equivalents (FCEs)** including:
  - A comprehensive course (0.5 FCE) specified as part of the requirements for each emphasis below.
  - 2.0 FCEs as follows:
    - HAD5011H *Canada's Health Care System and Health Policy (Doctoral Stream)*
    - HAD5772H *Intermediate Statistics for Health Systems Researchers* (or equivalent if specified in the selected emphasis)
    - HAD6760H *Introduction to Health Services and Systems Research Theory and Methods*
    - HAD6770H *Applying Health Services and Systems Research Methods*.
- Writing of a **PhD thesis** under the supervision of an approved thesis committee (supervisor plus at least two additional graduate faculty members).
- **Oral defence** of the thesis before an examination committee.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program; Concentration: Health Systems Research (Flexible-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the IHPME's additional admission requirements stated below.
- A master's degree (MA or MSc) requiring a thesis with a B+ average or higher.
- Satisfactory references pertaining to the applicant's academic and research abilities.
- Outstanding students with a non-thesis master's degree may be admitted to the PhD upon the recommendation of the appropriate IHPME committee, if the applicant has the appropriate background preparation and research experience or publications which can be considered equivalent to a master's thesis.

Completion Requirements

- Students must register full-time for the first four years of their program (Fall, Spring, Summer sessions); thereafter, they may register part-time.
- Students must select **one of six emphases** and complete the required emphasis courses listed below.
- Completion of **5.0 full-course equivalents (FCEs)** including:
  - A comprehensive course (0.5 FCE) specified as part of the requirements for each emphasis below.
  - 2.0 FCEs as follows:
    - HAD5011H *Canada's Health Care System and Health Policy (Doctoral Stream)*
    - HAD5772H *Intermediate Statistics for Health Systems Researchers* (or equivalent if specified in the selected emphasis)
    - HAD6760H *Introduction to Health Services and Systems Research Theory and Methods*
    - HAD6770H *Applying Health Services and Systems Research Methods*.
- Writing of a **PhD thesis** under the supervision of an approved thesis committee (supervisor plus at least two additional graduate faculty members).
- **Oral defence** of the thesis before an examination committee.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

HPME: Health Administration MHSc

The **Master of Health Science (MHSc) program** is geared to health managers and professionals who wish to acquire a graduate education in health administration. The program's modular format allows learners to complete the degree without interrupting their careers.

MHSc Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy IHPME's additional admission requirements stated below.
- Normally, the equivalent of a University of Toronto B+ average or higher in each of the last two years of an appropriate bachelor's degree from a recognized university. Applicants are strongly advised to have some prior preparation in quantitative courses such as statistics, accounting, and economics.
- Full-time, relevant work experience.

Completion Requirements

- Completion of **10.0 full-course equivalents (FCEs)** as follows:
  - 9.0 FCEs are required subjects, which include a minimum of 1.0 FCE in a field placement:
    - HAD5010H *Canada's Health System and Health Policy: Part I*
    - HAD5020H *Canada's Health System and Health Policy: Part II*
    - HAD5711H *Theory and Practice of Strategic Planning and Management in Health Services Organization*
    - HAD5713H *Introduction to Population Health Management*
    - HAD5721H *Strategic Management of Quality and Organizational Behaviour in Health Services Organizations*
    - HAD5723H *Health Services Accounting*
    - HAD5724H *Quantitative Methods for Health Services Management and Policy*
    - HAD5725H *Health Economics*
    - HAD5731H *Translating Leadership Into Practice*
    - HAD5733H *Health Services Finance*
    - HAD5741H *Health Law and Ethics*
    - HAD5761H *Introduction to eHealth: Informatics, Innovations, and Information Systems*
    - HAD5769H *Human Resources Management in the Health Field*
    - HAD5770H *Program Planning and Evaluation*
    - HAD5775H *Competition, Cooperation, and Strategy in Health Care*
    - HAD5800H *The Fundamentals of Health Services Leadership*
    - HAD6010Y *Health Care Leadership Practicum*.
  - The remaining 1.0 FCE are elective courses.
  - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis.

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW)
Time Limit: 3 years full-time

HPME: Health Informatics MHI

The Master of Health Informatics (MHI) is a professional program which provides graduates with expertise in clinical information and communication technologies (ICTs) required to lead organizational and health system change. The MHI degree program prepares health informaticians to bridge the gaps between clinicians and ICT specialists.

There are two options available to complete the MHI:

- **Regular MHI option:** This is designed for individuals who are not currently in a health informatics profession and are seeking a career in the field. Applicants to this option should not be employed full-time. The regular MHI option is offered in person.
- **Executive MHI option:** This is designed for individuals with at least five years of work experience in the health-care sector and are interested in pursuing leadership positions and other career development. This program option enables students to continue professional employment and sustain career momentum while gaining specialized health informatics knowledge. The Executive MHI option is offered through online delivery. Students are required to be on campus for two residencies of 10 days each in February of Year 1 and February of Year 2.

Regular MHI Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy IHPME's additional admission requirements stated below.
- Appropriate bachelor's degree from a recognized university. Eligible undergraduate degrees include those in a health sciences or social sciences specialty, Regulated Health Professions in Ontario, or a computer science or information science specialty with the equivalent of a minimum mid-B average in the last academic year.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Successful applicants normally have relevant professional experience as a health services professional (for example, manager or administrator) or health sciences/clinical practitioner with demonstrated basic literacy and/or programming skills in computer applications relevant to the health sector, or a computer or information technician within a health-care setting or health software vendor.

Completion Requirements

- Completion of **10.0 full-course equivalents (FCEs)** as follows:
  - **Required coursework** (7.5 FCEs)

        - MHI1001H *Information and Communication Technology in Health Informatics*
        - MHI1002H *Complexity of Clinical Care*
        - MHI2001H *Fundamentals of Health Informatics*
        - MHI2002H *Emergent Topics in Health Informatics*
        - MHI2003H *Emerging Applications in Consumer, Public, and Global Health Informatics*
        - MHI2004H *Human Factors and Systems Design in Health Care*
        - MHI2006H *Advanced Topics in Health Informatics (Strategic Frameworks for Solution Architecture)*
        - MHI2007H *Quantitative Skills in Health Informatics*
        - MHI2008H *Project Management for Health Informatics*
        - MHI2009H *Evaluation and Performance Measurements in Health Care*
        - MHI2017H *Systems Analysis and Process Innovation in Healthcare*
        - MHI2018H *Knowledge Management and Information Systems Design*
        - MHI2021H *Canada's Health System and Digital Health Policy*
        - MHI2022H *Economics and Value Design in Health Informatics*
        - MHI2023H *Data Governance and Interoperability*
    - **Elective coursework** (0.5 FCE). Students are encouraged to select an elective that allows them to focus on their individual areas of interest in health informatics. For this reason, the MHI program does not impose a selection of electives. Students are free to choose from all graduate courses across all disciplines at the University of Toronto. All selections are subject to approval in advance by the Program Director and the IHPME Chair. Students can choose from the following MHI electives:
        - MHI2010H *Extended Health Informatics Practicum*
        - MHI2013H *Data Visualization in Health Care*
        - MHI2020H *Leadership for Digital Health Transformation*
        - MHI2024H *Advanced Topics in Data Governance in Health Informatics*
        - MHI3000H *Independent Reading for Health Informatics.*
    - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis.
    - A four-month, full-time **practicum or field placement** (MHI2005Y).
- Degree requirements will be completed in 16 months across four consecutive sessions.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F)
Time Limit: 3 years full-time

Executive MHI Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy IHPME's additional admission requirements stated below.
- Appropriate bachelor's degree from a recognized university. Eligible undergraduate degrees include those in a health sciences or social sciences specialty, Regulated Health Professions in Ontario, or a computer science or information science specialty with the equivalent of a minimum mid-B average in the last academic year.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Successful applicants normally have relevant professional experience (at least five years) as a health services professional (for example, manager or administrator) or health sciences/clinical practitioner with demonstrated basic literacy and/or programming skills in computer applications relevant to the health sector, or a computer or information technician within a health-care setting or health software vendor.
- Successful applicants may be actively employed in a health informatics role or capacity.

Completion Requirements

- Completion of **10.0 full-course equivalents (FCEs)** as follows:
    - **Required coursework** (7.5 FCEs)
        - MHI1001H *Information and Communication Technology in Health Informatics*
        - MHI1002H *Complexity of Clinical Care*
        - MHI2001H *Fundamentals of Health Informatics*
        - MHI2002H *Emergent Topics in Health Informatics*
        - MHI2003H *Emerging Applications in Consumer, Public, and Global Health Informatics*
        - MHI2004H *Human Factors and Systems Design in Health Care*
        - MHI2006H *Advanced Topics in Health Informatics (Strategic Frameworks for Solution Architecture)*
        - MHI2007H *Quantitative Skills in Health Informatics*
        - MHI2008H *Project Management for Health Informatics*
        - MHI2009H *Evaluation and Performance Measurements in Health Care*
        - MHI2017H *Systems Analysis and Process Innovation in Healthcare*
        - MHI2018H *Knowledge Management and Information Systems Design*
        - MHI2021H *Canada's Health System and Digital Health Policy*
        - MHI2022H *Economics and Value Design in Health Informatics*
        - MHI2023H *Data Governance and Interoperability.*

    - **Elective coursework** (1.0 FCE). Students are encouraged to select two electives that allow them to focus on their individual areas of interest in health informatics. For this reason, the MHI program does not impose a selection of electives. Students are free to choose from all graduate courses across all disciplines at the University of Toronto. All selections are subject to approval in advance by the Program Director and the IHPME Chair. Students can choose from the following MHI electives:
        - MHI2013H *Data Visualization in Health Care*
        - MHI2016H *Health Informatics Project Extension*
        - MHI2020H *Leadership for Digital Health Transformation*
        - MHI2024H *Advanced Topics in Data Governance in Health Informatics*
        - MHI3000H *Independent Reading for Health Informatics.*
    - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis.
    - A four-month, employer-sponsored or mentor-supervised *Health Informatics Project* (MHI2015Y).
- The Executive MHI degree requirements will be completed in 22 months across six consecutive sessions.
- The Executive MHI option is offered through online delivery. Students are required to be on campus for two residencies of 10 days each in February of Year 1 and February of Year 2.

Mode of Delivery: Online
Program Length: 6 sessions full-time (typical registration sequence: S-FWS-FW)
Time Limit: 3 years full-time

HPME: Health Policy, Management and Evaluation: Emphases

Health Economics

Participating Programs:

- Health Policy, Management and Evaluation MSc; Concentration: Health Systems Research

Students in the **thesis option of the Health Systems Research concentration** have the option to **complete an emphasis** by completing **2.0 full-course equivalents (FCEs)** in a given area. The emphasis requirements will also count toward their 3.0 FCE concentration requirements.

Students must complete 2.0 FCEs as follows:

- HAD5730H *Economic Evaluation Methods for Health Systems Research.*
- HAD5744H *Quantitative Methods in HSR I.*
- HAD5746H *Quantitative Methods in HSR II.*
- HAD5760H *Advanced Health Economics and Policy Analysis.*

Health Economics

Participating Programs:

- Health Policy, Management and Evaluation PhD; Concentration: Health Systems Research

Students enrolled in the **Health Systems Research concentration** of the PhD program must study under **one of six emphases**, described below, and complete six courses (**3.0 full-course equivalents [FCEs]**) related to their declared emphasis.

Students must complete 3.0 FCEs as follows:

- HAD5730H *Economic Evaluation Methods for Health Systems Research.*
- HAD5744H *Quantitative Methods in HSR I.*
- HAD5746H *Quantitative Methods in HSR II.*
- HAD5760H *Advanced Health Economics and Policy Analysis.*
- HAD6750H *Advanced Health Economics and Policy Analysis II.*
- 0.5 FCE from the course listing for the Health Systems Research concentration.

Health Informatics Research

Participating Programs:

- Health Policy, Management and Evaluation MSc; Concentration: Health Systems Research

Students enrolled in the thesis option of the **Health Systems Research concentration** of the MSc program have the option to complete an **emphasis** by completing **2.0 full-course equivalents (FCEs)** in a given area. The emphasis requirements will also count toward their 3.0 FCE concentration requirements.

Students must complete 2.0 FCEs as follows:

- HAD5726H *Evaluation and Research Design in Health Informatics.*
- Three courses (1.5 FCEs) from the course listing for the Health Systems Research concentration, Master of Health Informatics program, or other relevant graduate courses as approved by the Graduate Coordinator.

Health Informatics Research

Participating Programs:

- Health Policy, Management and Evaluation PhD; Concentration: Health Systems Research

Students enrolled in the **Health Systems Research concentration** of the PhD program must study under **one of six emphases**, described below, and complete six courses (**3.0 full-course equivalents [FCEs]**) related to their declared emphasis.

Students must complete 3.0 FCEs as follows:

- HAD5726H *Evaluation and Research Design in Health Informatics.*
- HAD5747H *Cognitive, Social, and Information Science Theory in Health Informatics Research*.
- HAD6764H *Health Informatics Research Comprehensive Course*.
- Three courses (1.5 FCEs) from the course listing for the Health Systems Research concentration, Master of Health Informatics program, or other relevant graduate courses as approved by the Graduate Coordinator.

Health Policy

Participating Programs:

- Health Policy, Management and Evaluation MSc; Concentration: Health Systems Research

Students in the **thesis option of the Health Systems Research concentration** have the option to **complete an emphasis** by completing **2.0 full-course equivalents (FCEs)** in a given area. The emphasis requirements will also count toward their 3.0 FCE concentration requirements.

Students must complete 2.0 FCEs as follows:

- HAD5778H *Comparative Health Systems and Policy.*
- 1.5 FCEs from the following list:
  - CHL3020H *Ethics and Artificial Intelligence for Health*
  - CHL4004H *Global Health Policy*
  - CHL5300H *Public Health Policy*
  - CHL5624H *Historical, Ethical, and Philosophical Foundations of Public Health*
  - PHM1139H *Diagnosing Corruption in the Health Sector and Anti-Corruption Policies and Tools*
  - Other health policy research course as appropriate, for example:
    - CHL5702H *History of International Health* or
    - CHL5704H *International Human Rights Law and Global Health: The Right to Health in Theory and Practice*.

Health Policy

Participating Programs:

- Health Policy, Management and Evaluation PhD; Concentration: Health Systems Research

Students enrolled in the **Health Systems Research concentration** of the PhD program must study under **one of six emphases**, described below, and complete six courses (**3.0 full-course equivalents [FCEs]**) related to their declared emphasis.

Students must complete 3.0 FCEs as follows:

- HAD5778H *Comparative Health Systems and Policy.*
- HAD6763H *Health Policy Comprehensive Course.*
- 0.5 FCE from the following list:
  - CHL3020H *Ethics and Artificial Intelligence for Health*
  - CHL4004H *Global Health Policy*
  - CHL5300H *Public Health Policy*
  - CHL5624H *Historical, Ethical, and Philosophical Foundations of Public Health*
  - PHM1139H *Diagnosing Corruption in the Health Sector and Anti-Corruption Policies and Tools*
  - Other course as appropriate, for example:
    - CHL5702H *History of International Health*
    - CHL5704H *International Human Rights Law and Global Health: The Right to Health in Theory and Practice*.
- 0.5 FCE from the following list:
  - HAD5742H *Mixed Methods for Health Systems Research*
  - HAD5781H *Case Study Research for Health Services, Systems, and Policy*
  - HSR1001H *Introduction to Qualitative Methods for Health Systems and Policy Research*
  - Other courses from the course listing for the Health Systems Research concentration in the area of policy-relevant methods.
- 0.5 FCE from the course listing for the Health Systems Research concentration, or other HPME concentrations as approved by the HPME graduate coordinator.

Health Systems Artificial Intelligence

Participating Programs:

- Health Policy, Management and Evaluation MSc; Concentration: Health Systems Research

Students in the **thesis option of the Health Systems Research concentration** have the option to **complete an emphasis** by completing **2.0 full-course equivalents (FCEs)** in a given area. The emphasis requirements will also count toward their 3.0 FCE concentration requirements.

Students in the Vector pathway within the Health Systems Research concentration must complete the emphasis in Health Systems Artificial Intelligence and complete their remaining 1.0 FCE concentration requirements by taking HAD5011H *Canada's Health System and Health Policy* and HAD5772H *Intermediate Statistics for Health Systems Researchers*.

- Students must complete 2.0 FCEs as follows:
  - CHL3020H *Ethics and AI in Health*
  - CHL5230H *Applied Machine Learning for Health Data* (research methods course)
  - MHI2002H *Emergent Topics in Heath Informatics*
  - 0.5 FCE from the course listing for the Health Systems Research concentration or the Master of Health Informatics program. Recommended: HAD5726H *Evaluation and Research Design in Health Informatics*.

Health Technology Assessment

Participating Programs:

- Health Policy, Management and Evaluation MSc; Concentration: Health Systems Research

Students in the **thesis option of the Health Systems Research concentration** have the option to **complete an emphasis** by completing **2.0 full-course equivalents (FCEs)** in a given area. The emphasis requirements will also count toward their 3.0 FCE concentration requirements.

Students must complete 2.0 FCEs as follows:

- HAD5301H *Introduction to Clinical Epidemiology and Health Care Research* or equivalent.
- HAD5307H *Introduction to Applied Biostatistics.*
- 0.5 FCE from the course listing for the Health Systems Research concentration.
- 0.5 FCE from the following list:
  - HAD5730H *Economic Evaluation Methods for Health Systems Research*
  - HAD5771H *Resource Allocation Ethics*
  - HAD5779H *Evidence Synthesis for Health Services, Systems, and Policy Research* or HAD5308H *Evidence Synthesis: Systematic Reviews and Meta-Analysis*.

Health Technology Assessment

Participating Programs:

- Health Policy, Management and Evaluation PhD; Concentration: Health Systems Research

Students enrolled in the **Health Systems Research concentration** of the PhD program must study under **one of six emphases**, described below, and complete six courses (**3.0 full-course equivalents [FCEs]**) related to their declared emphasis.

Students must complete 3.0 FCEs as follows:

- HAD5301H *Introduction to Clinical Epidemiology and Health Care Research.*
- HAD6765H *Health Technology Assessment Comprehensive Course* (Credit/No Credit).
- Three courses (1.5 FCEs) from the course listing for the Health Systems Research concentration.
- One course (0.5 FCE) from the following list:
  - HAD5730H *Economic Evaluation Methods for Health Systems Research*.
  - HAD5771H *Resource Allocation Ethics*.
  - HAD5779H *Evidence Synthesis for Health Services, Systems, and Policy Research* or HAD5308H *Evidence Synthesis: Systematic Reviews and Meta-Analysis*.

Organization and Management Studies

Participating Programs:

- Health Policy, Management and Evaluation MSc; Concentration: Health Systems Research

Students in the **thesis option of the Health Systems Research concentration** have the option to **complete an emphasis** by completing **2.0 full-course equivalents (FCEs)** in a given area. The emphasis requirements will also count toward their 3.0 FCE concentration requirements.

Students must complete 2.0 FCEs as follows:

- HAD5773H *Introduction to Theories of Organizational Behaviour and Applications to the Health Care Sector.*
- 1.5 FCEs from the following list:
  - HAD5727H *Knowledge Transfer and Exchange*
  - HAD5737H *Tools for Implementation Science*
  - HAD5740H *Intermediate Level Qualitative Methods*
  - HAD5742H *Mixed Methods for Health Systems Research*
  - HAD5744H *Applied Health Econometrics I*
  - HSR1001H *Introduction to Qualitative Methods for Health Systems and Policy Research*.

Organization and Management Studies

Participating Programs:

- Health Policy, Management and Evaluation PhD; Concentration: Health Systems Research

Students enrolled in the **Health Systems Research concentration** of the PhD program must study under **one of six emphases**, described below, and complete six courses (**3.0 full-course equivalents [FCEs]**) related to their declared emphasis.

Students must complete 3.0 FCEs as follows:

- HAD5742H *Mixed Methods for Health Systems Research.*
- HAD5750H *Seminar in Organizational Behaviour*.
- HAD5773H *Introduction to Theories of Organizational Behaviour and Applications to the Health Care Sector.*
- HAD6762H *Organization and Management Studies Comprehensive Course.*
- HSR1001H *Introduction to Qualitative Methods for Health Systems and Policy Research.*
- One course (0.5 FCE) from the course listing for the Health Systems Research concentration.

Outcomes and Evaluation Studies

Participating Programs:

- Health Policy, Management and Evaluation MSc; Concentration: Health Systems Research

Students in the **thesis option of the Health Systems Research concentration** have the option to **complete an emphasis** by completing **2.0 full-course equivalents (FCEs)** in a given area. The emphasis requirements will also count toward their 3.0 FCE concentration requirements.

Students must complete 2.0 FCEs as follows:

- HAD5720H *Evaluation I*
- 0.5 FCE from the following list:
  - HAD5743H *Evaluation II*
  - HAD5763H *Advanced Methods in Health Services Research*
- 0.5 FCE from the following list:
  - CHL5202H *Biostatistics II*
  - HAD5316H *Biostatistics II: Advanced Techniques in Applied Regression Methods*

    - HAD5772H *Intermediate Statistics for Health Systems Researchers*
- 0.5 elective FCE from the course listing for the Health Systems Research concentration.

Outcomes and Evaluation Studies

Participating Programs:

- Health Policy, Management and Evaluation PhD; Concentration: Health Systems Research

Students enrolled in the **Health Systems Research concentration** of the PhD program must study under **one of six emphases**, described below, and complete six courses (**3.0 full-course equivalents [FCEs]**) related to their declared emphasis.

Students must complete 3.0 FCEs as follows:

- HAD5743H *Evaluation II*.
- HAD6761H *Outcomes and Evaluation Studies Comprehensive Course*.
- HSR1001H *Introduction to Qualitative Methods for Health Systems and Policy Research*.
- Two courses (1.0 FCE) from the following list:
    - HAD2003H *Learning Health Systems Part 1: Identifying Opportunities for System Change and Designing Sound Innovations*.
    - HAD5720H *Evaluation I*.
    - HAD5728H *Performance Measurement in Health Care: Theory and Application*.
    - HAD5730H *Economic Evaluation Methods for Health Systems Research*.
    - HAD5740H *Intermediate Level Qualitative Methods*.
    - HAD5742H *Mixed Methods for Health Systems Research*.
    - HAD5763H *Advanced Methods in Health Services Research*.
    - HAD5779H *Evidence Synthesis for Health Services, Systems, and Policy Research* or HAD5308H *Evidence Synthesis: Systematic Reviews and Meta-Analysis*.
    - HAD5781H *Case Study Research for Health Services, Systems and Policy*.
- One course (0.5 FCE), generally an advanced methods course, from the course listing for the Health Systems Research concentration.

PhD students in the Health Systems Research concentration who are pursuing the emphasis in Outcomes and Evaluation Studies may fulfil the concentration requirements by replacing HAD5772H *Intermediate Statistics for Health Systems Researchers* with CHL5202H *Biostatistics II* or HAD5316H *Biostatistics II: Advanced Techniques in Applied Regression Methods*.

HPME: Health Administration MHSc Courses

Students in the Master of Health Science program may elect to be assessed on a Credit/No Credit basis in courses up to a total of 0.5 FCE.

Required Courses

All courses are offered in modular format unless marked otherwise.

Course Code	Course Title
HAD5010H	Canada's Health System and Health Policy: Part I
HAD5020H	Canada's Health System and Health Policy: Part II
HAD5711H	Theory and Practice of Strategic Planning and Management in Health Services Organization
HAD5713H	Introduction to Population Health Management
HAD5721H	Strategic Management of Quality and Organizational Behaviour in Health Services Organizations
HAD5723H	Health Services Accounting
HAD5724H	Quantitative Methods for Health Services Management and Policy
HAD5725H	Health Economics
HAD5731H	Translating Leadership Into Practice
HAD5733H	Health Services Finance
HAD5741H	Health Law and Ethics
HAD5761H	Introduction to eHealth: Informatics, Innovations, and Information Systems
HAD5769H	Human Resources Management in the Health Field
HAD5770H	Program Planning and Evaluation
HAD5775H	Competition, Cooperation, and Strategy in Health Care
HAD5800H	The Fundamentals of Health Services Leadership
HAD6010Y	Health Care Leadership Practicum

Elective Courses

Non-modular electives may be taken subject to program approval.

Course Code	Course Title
HAD5736H	Operations Research Tools for Quantitative Health Care Decision Making
HAD5767H	Health Services Marketing
HAD5777H	Leading and Managing Change: Building Adaptive Capacity
HAD6011H	Health Care Leadership Practicum Extension

HPME: Health Policy, Management and Evaluation MSc, PhD Courses

Students in the Master of Science and Doctor of Philosophy programs may elect to be assessed on a Credit/No Credit basis in courses up to a total of 0.5 FCE.

Concentration: Clinical Epidemiology and Health Care Research

Compulsory Courses

Course Code	Course Title
HAD5301H	Introduction to Clinical Epidemiology and Health Care Research
HAD5307H	Introduction to Applied Biostatistics
HAD5311H	Comprehensive/Synthesis (one year)
HAD5316H	Biostatistics II: Advanced Techniques in Applied Regression Methods

Recommended Courses

Course Code	Course Title
HAD5302H	Measurement in Clinical Research
HAD5303H	Controlled Clinical Trials
HAD5304H	Clinical Decision Making and Cost Effectiveness
HAD5305H	Evidence-Based Guidelines
HAD5306H	Introduction to Health Services Research and the Use of Health Administrative Data
HAD5308H	Evidence Synthesis: Systematic Reviews and Meta-Analysis
HAD5309H	Observational Studies: Theory, Design, and Methods
HAD5310H	Pragmatic Issues in Conduct of Controlled Trials
HAD5730H	Economic Evaluation Methods for Health Systems Research
HAD5760H	Advanced Health Economics and Policy Analysis

Elective Courses

Course Code	Course Title
HAD5312H	Decision Modelling for Clinical Policy and Economic Evaluation
HAD5313H	Advanced Design and Analysis Issues in Clinical Trials
HAD5314H	Applied Bayesian Methods in Clinical Epidemiology and Health Care Research
HAD5315H	Advanced Topics in Measurement
HAD5316H	Biostatistics II: Advanced Techniques in Applied Regression Methods
HAD5317H	Qualitative Design and Techniques
HAD5318H	Advanced Evidence Synthesis
HAD5319H	Biostatistics III: Advanced Biostatistical Techniques for Observational Studies
HAD5320H	Writing Mentorship
HAD6360H	Required Research Practicum in Clinical Epidemiology
HAD6361H	Optional Research Practicum in Clinical Epidemiology
HAD7002H	Reading Course

Other IHPME courses or extra-departmental courses may be considered as elective courses and are subject to approval of the Institute of Health Policy, Management and Evaluation.

Concentration: Health Professions Education Research (HPER)

Required Courses

Course Code	Course Title
HAD5011H	Canada's Health System and Health Policy
HAD6500H	Essential Skills in HPER
HAD6501H	Introduction to Methods/Methodologies for HPER

Course Code	Course Title
HAD6502H **or** HAD6503H	Survey of Critical and Interpretive Social Science Theory for HPER **or** Survey of Cognitive and Behavioural Sciences Theory for Health Professions Education Research
HAD6504H **or** HAD6505H	Intermediate Critical and Interpretive Social Science Methods **or** Intermediate Cognitive and Behavioural Sciences Methods/Methodologies for Health Professions Education Research
HAD6560H	Health Professions Education Research (HPER) Comprehensive Exam

Elective Courses

Students are encouraged to select electives that allow them to focus on their individual areas of interest in health professions education research (HPER). For this reason, the HPER program does not impose a selection of electives. Students are free to choose from all graduate courses across all disciplines at the University of Toronto. All selections are subject to approval in advance by the Program Director and the IHPME Graduate Chair. Students can also choose from the following HPER electives:

Course Code	Course Title
HAD6506H	Assessment in Health Professions Education
HAD6507H	Identity and Professional Life for Health Professions Education Research
HAD6508H	Sociology of the Professions
HAD6509H	The Examination: The Technology that Shapes What We Can Know, Do, and Be
HAD6510H	Academic Medicine: From the Global to the Virtual

Concentration: Health Systems Leadership and Innovation

Required Courses

Course Code	Course Title
HAD2001H	Strategic Vision and Planning for Health System Change
HAD2006H	Leading and Evaluating Health Professional Education
HAD2007H	Learning Health Systems Innovation and Transformation
HAD2009H	Health Economics
HAD2012H	Leading and Innovating in Canada's Digital Health Ecosystem
HAD2013H	Fundamentals of Health Economics and Policy

Experiential Learning Courses

Course Code	Course Title
HAD2040Y	Systems Innovation Capstone Project

Elective Courses

Course Code	Course Title
HAD2002H	Learning Health Systems Part 2: Implementation and Evaluation of System Innovations
HAD2003H	Learning Health Systems Part 1: Identifying Opportunities for System Change and Designing Sound Innovations
HAD2004H	Challenges and Opportunities for Physician Leadership and Competency Development
HAD2005H	Quality Improvement Skills for Healthcare Leaders
HAD2008H	Human Factors, Strategy, and Innovation Leadership
HAD2010H	Health Systems Leadership Practicum (Individual)
HAD2030H	Systems Innovation Capstone Paper

Concentration: Health Systems Research

Course Code	Course Title
HAD2002H	Learning Health Systems Part 2: Implementation and Evaluation of System Innovations
HAD2003H	Learning Health Systems Part 1: Identifying Opportunities for System Change and Designing Sound Innovations
HAD5011H	Canada's Health System and Health Policy
HAD5012H	Patient and Caregiver Engagement in Research
HAD5013H	Graduate Seminar in Emotions and Ethics
HAD5022H	Politics, Policy, Public Health, and Health Technology

Course Code	Course Title
HAD5726H	Evaluation and Research Design in Health Informatics
HAD5727H	Knowledge Transfer and Exchange
HAD5728H	Performance Measurement in Health Care: Theory and Application
HAD5730H	Economic Evaluation Methods for Health Systems Research
HAD5737H	Tools for Implementation Science
HAD5738H	Advanced Methods in Economic Evaluation
HAD5740H	Intermediate Level Qualitative Methods
HAD5742H	Mixed Methods for Health Systems Research
HAD5743H	Evaluation II
HAD5744H	Quantitative Methods in HSR I
HAD5746H	Quantitative Methods in HSR II
HAD5747H	Cognitive, Social, and Information Science Theory in Health Informatics Research
HAD5748H	Introduction to Survey Design and Psychometrics
HAD5749H	Knowledge to Action: Disseminating and Implementing Evidence into Practice
HAD5750H	Seminar in Organizational Behaviour
HAD5751H	AI Development and Implementation in Health Care
HAD5752H	Introduction to Knowledge Translation and Implementation Science
HAD5753H	Training for Impact: Art and Science of Health System Leadership
HAD5754H	Global Quality of Care in Health Systems
HAD5755Y	Health Economics Graduate Seminar Series
HAD5760H	Advanced Health Economics and Policy Analysis
HAD5763H	Advanced Methods in Health Services Research
HAD5771H	Resource Allocation Ethics
HAD5772H	Intermediate Statistics for Health Systems Researchers
HAD5773H	Introduction to Theories of Organizational Behaviour and Applications to the Health Care Sector
HAD5777H	Leading and Managing Change: Building Adaptive Capacity
HAD5778H	Comparative Health Systems and Policy
HAD5779H	Evidence Synthesis for Health Services, Systems and Policy Research
HAD5781H	Case Study Research for Health Services, Systems and Policy
HAD6506H	Assessment in Health Professions Education
HAD6750H	Advanced Health Economics and Policy Analysis II
HAD6760H	Introduction to Health Services and Systems Research Theory and Methods
HAD6761H	Outcomes and Evaluation Studies Comprehensive Course
HAD6762H	Organization and Management Studies Comprehensive Course
HAD6763H	Health Policy Comprehensive Course
HAD6764H	Health Informatics Research Comprehensive Course
HAD6765H	Health Technology Assessment Comprehensive Course
HAD6770H	Applying Health Services and Systems Research Methods
HAD7001H	Reading Course
JNH5001H	Health Care Settings, Site, and Human Well Being
JNH5003H	Home and Community Care Knowledge Translation

Concentration: Quality Improvement and Patient Safety

Required Courses

Course Code	Course Title
HAD3010H	Fundamentals of Improvement Science
HAD3020H	Quality Improvement Methods
HAD3030H	Concepts and Strategies in Patient Safety
HAD3040Y	Project Practicum
HAD3041Y	Design and Methods for Thesis Research
HAD3050H	Leading and Managing Change
HAD3060H	Quality Improvement in Health Systems
HAD3070H	Health Law and Risk Management for Quality Improvement and Patient Safety

Practicum Course

Course Code	Course Title
HAD3080H	External Practicum

Elective Courses

Course Code	Course Title
HAD3025H	Teaching QI and Patient Safety
HAD3035H	Human Factors and Healthcare Quality and Safety
HAD3090H	The Application of Lean in Healthcare
HAD4000H	Reading Course
HAD5777H	Leading and Managing Change: Building Adaptive Capacity

Cross-Listed Courses

These courses are limited to certain program students in Health Policy, Management and Evaluation. Please check the IHPME website.

Course Code	Course Title
CHL5300H	Public Health Policy
HSR1001H	Introduction to Qualitative Methods for Health Systems and Policy Research
HSR1002H	Health Services Research Seminar
JCV3060H	Advanced Topics in Cardiovascular Sciences — Molecular Biology and Heart Signal Transduction
JCV3061H	Advanced Topics in Cardiovascular Sciences — Hormones
JCV3062H	Advanced Topics in Cardiovascular Sciences — Heart Function
JCV3063H	Advanced Topics in Cardiovascular Sciences — Vascular

History

History: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

History

MA and PhD

- Fields by Chronology or Geography:
  - African History;
  - American History;
  - Atlantic World History;
  - British and Irish History;
  - Canadian History;
  - East Asian History;
  - European History;
  - Latin American and Caribbean History;
  - Medieval History;
  - Mediterranean and Middle Eastern History;
  - Russian History;
  - South Asian History;
  - Southeast Asian History
- Fields by Theme:
  - Contemporary International History (MA only);
  - Cultural and Intellectual History;
  - Food History;
  - History of Conflict, Violence, and Genocide;
  - History of Economy, Technology, and Society;
  - History of Empire, Colonialism, and Indigeneity;
  - History of Gender, Sex, and Sexualities;
  - History of Medicine;
  - History of Migration/Diaspora;
  - History of Religion and Society;
  - History of State, Politics, and Law;
  - International Relations;
  - Social History

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Book History and Print Culture**
  - History, MA, PhD
- **Contemporary East and Southeast Asian Studies**
  - History, MA
- **Diaspora and Transnational Studies**
  - History, MA, PhD
- **Ethnic, Immigration and Pluralism Studies**
  - History, MA, PhD
- **Food Studies**
  - History, MA, PhD
- **Jewish Studies**
  - History, MA, PhD
- **Sexual Diversity Studies**
  - History, MA, PhD
- **South Asian Studies**
  - History, MA, PhD
- **Women and Gender Studies**
  - History, MA, PhD

Overview

The Department of History offers a broadly diversified program of graduate studies leading to the **Master of Arts** and **Doctor of Philosophy** degrees. There are opportunities to study and research several geographic, chronological, and thematic areas of history. Visit the departmental website for descriptions of specific fields.

The University of Toronto also offers rich resources outside the department to support the study of history. The Robarts Research Library, unrivalled in Canada and among the leading university libraries in North America, provides a foundation for a wide range of study. Specialized collections are located elsewhere in the University including in a number of centres and research institutes. The Centre for Medieval Studies and the Pontifical Institute of Mediaeval Studies have particularly strong resources for European and British medieval history. The Munk School of Global Affairs and Public Policy; the Institute for the History and Philosophy of Science and Technology; the Centre for Criminology and Sociolegal Studies; the Institute for Urban and Community Studies; as well as the Centre for European, Russian, and Eurasian Studies afford additional opportunities for interdepartmental work. The department participates in a number of interdisciplinary collaborative specializations.

Contact and Address

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Sidney Smith Hall, Room 2074, 100 St. George Street
Toronto, Ontario M5S 3G3 Canada

History: Graduate Faculty

Full Members

Anastakis, Dimitry - PhD
Austin, Robert - BA, MA, PhD
Bartlett, Kenneth - BA, MA, PhD
Bender, Daniel Eric - BA, PhD
Bergen, Doris - MA, PhD
Bertram, L.K. - MA, PhD
Birla, Ritu - BA, MPH, PhD
Bohaker, Heidi - BA, BEd, MA, DPhil
Brown, Elspeth - MA, PhD

Chen, Li - BA, MA, AM, JD, PhD
Chin, Carol - BA, MA, PhD
Cochelin, Isabelle - DipdESup, BA, MA, PhD
Cohen, Paul - AM, PhD
Coleman, Kevin - PhD
Everett, Nicholas - BA, MA, PhD
Fujitani, Takashi - BA, MA, PhD
Gervers, Michael - BA, MA, PhD
Gettler, Brian - BS, MA, PhD
Halpern, Rick - PhD
Hanssen, Jens - BPhil, DPhil
Hastings, Paula - BA, MA, PhD
Hawkins, Sean - MA, PhD
Hill, Susan - PhD
Jenkins, Jennifer - BA, MA, PhD
Jennings, Eric - BA, MA, PhD
Kasekamp, Andres - PhD
Kasturi, Malavika - DPhil
Kazal, Russell - AB, MA, PhD
Keil, Charlie - BA, MA, PhD
Lam, Tong - BSc, MA, PhD
Loeb, Lori - BA, PhD
MacArthur, Julie - BA, MPH, PhD
Magocsi, Paul - BA, MA, MA, PhD, FRSC
Mar, Lisa - PhD
McGowan, Mark - BA, MA, PhD
Meyerson, Mark - BA, PhD
Mills, Sean - MA, PhD
Morgan, Cecilia Louise - BA, BA, MA, PhD
Mori, Jennifer - PhD
Murphy, M. - BA, PhD
Musisi, Nakanyike - PhD
Nelson IV, William Max - BA, MA, MSS, PhD
Newton, Melanie - BA, PhD ***(Graduate Chair)***
Noel, Janet - BA, MA, PhD
Penfold, Steve - MA, PhD
Phillips, James - LLB, MA, PhD
Pilcher, Jeffrey - BA, MA, PhD
Raman, Bhavani - BA, MA, PhD
Retallack, James - BA, DPhil
Rockel, Stephen - AM, DPhil
Rothman, E. Natalie - MA, DPhil
Sayle, Timothy - AM, MPA, PhD
Sharma, Jayeeta - BA, MA, MPH, PhD
Shorter, Edward - BA, MA, PhD
Silano, Giulio - BA, Bed, LLB, MA, PhD
Smith, Alison - AM, PhD
Tavakoli-Targhi, Mohamad - BA, MA, PhD
Terpstra, Nicholas - BA, MA, PhD
Tran, Nhung - MA, PhD
Van Isschot, Luis - MA, PhD
Virani, Shafique - PhD
Walker, Tamara - PhD
Wang, Yvon - BA, PhD
Wilson, David - BA, MA, PhD
Wittmann, Rebecca - AB, MA, PhD
Woods, Rebecca - BA, MA, PhD
Wrobel, Piotr Jan - MA, PhD

Members Emeriti

Berger, Carl - BA, MA, PhD
Bothwell, Robert - BA, AM, PhD
Callahan, William - AB, MA, PhD
Dyck, Harvey - BA, MA, PhD
Estes, James - MA, PhD
Finlayson, Michael - BA, PhD
Goffart, Walter - AB, AM, PhD
Grendler, Paul - BA, MA, PhD
Hood, Adrienne - PhD
Iacovetta, Franca - AB, AM, PhD
Ingham, John - BA, MA, PhD
Israel, Milton - BS, MA, PhD
Kivimae, Juri - AM, PhD
Klein, Martin - BS, MA, PhD
Lahusen, Thomas - MA, PhD
Lloyd, Trevor - BA, MA, DPhil
MacDowell, Laurel - BA, MSc, PhD
MacMillan, Margaret - BPhil, DPhil
Nelson, Wendy - BS, MHSc
Pruessen, Ronald - BA, MA, PhD
Raby, David - BA, PhD
Radforth, Ian - BA, MA, PhD
Robertson, Ian - BA, MA, PhD
Smyth, Denis - BA, PhD
Viola, Lynne - BA, MA, PhD
Wagle, Narendra - BA, MA, PhD
Wark, Wesley - BA, BA, MA, PhD

Associate Members

Aidid, Safia - PhD
Dacome, Lucia - BA, MPH, PhD
Elhalaby, Esmat - BA, PhD
Kawashima, Ken - BA, MA, PhD
Schmid, André - BA, MA, PhD

History: History MA

The Department of History offers a broadly diversified program of graduate studies leading to the Master of Arts degree. There are opportunities to study and research several geographic, chronological, and thematic areas of history. Visit the departmental website for descriptions of specific fields. The requirements vary for the field in Contemporary International History; see the admission and program requirements below.

Students may complete the MA by:

- coursework and research paper or
- coursework and thesis (with special permission).

The MA program can be taken on a full-time or part-time basis.

Master of Arts (Coursework and Research Paper Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of History's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with at least a B+ standing.

- Successful completion of at least 6.0 full-course equivalents (FCEs) in history. Applicants without adequate history training may be required to complete an appropriate number of undergraduate history courses before being considered for admission. In rare cases, an applicant may be admitted to the MA program but will be required to do one or two courses in addition to the MA program requirements.
- In addition to the School of Graduate Studies online application form, applicants must submit:
  - an Application Information Form
  - three letters of recommendation
  - a 500-word specific research proposal outlining a precise field and area of historical investigation
  - a writing sample of no more than 3,000 words.
- Applicants who were educated outside Canada, whose primary language is not English, and who graduated from a university where the language of instruction was not English must demonstrate proficiency in the English language through the successful completion of the Test of English as a Foreign Language (TOEFL) with scores of at least:
  - paper-based TOEFL exam: 600 with 5 on the Test of Written English (TWE)
  - Internet-based TOEFL exam: 100/120 with 22/30 on the writing and speaking sections.

Completion Requirements

- Students must achieve at least an overall B average in their courses to maintain standing.
- Students must also demonstrate competency in a language other than English, to be assessed in a manner approved by the Associate Chair (Graduate) or designate.
- Students must successfully complete a total of **3.5 full-course equivalents (FCEs)** as follows:
  - HIS1997H *The Practice of History*
  - HIS2000Y MA essay
  - 2.0 FCE: HIS courses. Normally, up to 1.0 FCE may be taken outside the Department of History with the approval of the Associate Chair, Graduate.
- Full-time MA students are expected to complete all degree requirements within 12 months of entering the program.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Master of Arts (Thesis Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of History's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with at least a B+ standing.
- Successful completion of at least 6.0 full-course equivalents (FCEs) in history. Applicants without adequate history training may be required to complete an appropriate number of undergraduate history courses before being considered for admission. In rare cases, an applicant may be admitted to the MA program but will be required to do one or two courses in addition to the MA program requirements.
- In addition to the School of Graduate Studies online application form, applicants must submit:
  - an Application Information Form
  - three letters of recommendation
  - a 500-word specific research proposal outlining a precise field and area of historical investigation
  - a writing sample of no more than 3,000 words.
- Applicants who were educated outside Canada, whose primary language is not English, and who graduated from a university where the language of instruction was not English must demonstrate proficiency in the English language through the successful completion of the Test of English as a Foreign Language (TOEFL) with scores of at least:
  - paper-based TOEFL exam: 600 with 5 on the Test of Written English (TWE)
  - Internet-based TOEFL exam: 100/120 with 22/30 on the writing and speaking sections.

Completion Requirements

- Students must achieve at least an overall B average in their courses to maintain standing.
- Students must also demonstrate competency in a language other than English, to be assessed in a manner approved by the Associate Chair (Graduate) or designate.
- Students must successfully complete a total of **2.0 full-course equivalents (FCEs)** as follows:
  - HIS1997H *The Practice of History*
  - 1.5 FCEs: present an MA thesis.
- The thesis MA might take longer than the coursework MA. The thesis must be presented by full-time students within three years of entering the program; part-time students must present within six years of entering the program.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

History: History MA; Field: Contemporary International History

The field in Contemporary International History (CIH) focuses on the historical roots and genealogies of contemporary international issues. It emphasizes the development of research and analytical skills that will enrich decision-making in an increasingly interconnected, but tension-filled global environment.

The field is designed to prepare students in research, analytical, and communication skills for decision-making in non-academic careers in government, international organizations, non-governmental organizations, media, business and finance, law, and the cultural sector.

The coursework-plus-thesis option is not permitted in this field.

Master of Arts; Field: Contemporary International History

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of History's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with at least a B+ standing.
- A B+ average (grade point average of 3.3), or equivalent, in the final 5.0 FCEs of the BA.
- In addition to the School of Graduate Studies online application form, applicants must submit:
  - an Application Information Form
  - three letters of recommendation
  - a 500-word specific research proposal outlining a precise field and area of historical investigation
  - a writing sample of no more than 3,000 words.
- Applicants who were educated outside Canada, whose primary language is not English, and who graduated from a university where the language of instruction was not English must demonstrate proficiency in the English language through the successful completion of the Test of English as a Foreign Language (TOEFL) with scores of at least:
  - paper-based TOEFL exam: 600 with 5 on the Test of Written English (TWE)
  - Internet-based TOEFL exam: 100/120 with 22/30 on the writing and speaking sections.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **2.5 full-course equivalents (FCEs)** as follows:
  - HIS1997H *The Practice of History*
  - HIS1900H *History in International Affairs* or HIS1901H *Approaches and Methodologies in Contemporary International History*
  - the remaining 1.5 FCEs can be taken within or outside the History department.
- HIS2000Y, a research project defined in consultation with a supervisor and approved by the CIH Coordinator.
- Students must achieve at least an overall B average in their courses to maintain standing.
- Students must also demonstrate competency in a language other than English, to be assessed in a manner approved by the Associate Chair (Graduate) or designate.

Mode of Delivery: In person

Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

History: History PhD

The Department of History offers a broadly diversified program of graduate studies leading to the Doctor of Philosophy degree. There are opportunities to study and research several geographic, chronological, and thematic areas of history. Visit the departmental website for descriptions of specific fields.

Applicants may enter the PhD program via one of two routes: 1) following completion of an appropriate MA degree or 2) direct entry following completion of an appropriate bachelor's degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of History's additional admission requirements stated below.
- Normally, applicants may enter the PhD program with an **MA degree** in history or its equivalent with an A– average or better.
- Applicants must satisfy the department of their ability to do independent research at an advanced level.
- In addition to the School of Graduate Studies online application form, applicants must submit:
  - an Application Information Form
  - three letters of recommendation
  - a 500-word specific research proposal outlining a precise field and area of historical investigation
  - a writing sample of no more than 6,000 words.
- Applicants who were educated outside Canada, whose primary language is not English, and who graduated from a university where the language of instruction was not English must demonstrate proficiency in the English language through the successful completion of a recognized English-language proficiency examination as outlined in the School of Graduate Studies General Regulations.

Completion Requirements

- **Coursework**. With **MA degree in history**: students must successfully complete a total of **2.0 full-course equivalents (FCEs)** with a B+ average throughout the coursework.
- **Residence requirement.** Residence means students must be in such geographical proximity as to be able to visit the campus regularly and participate fully in the University's activities associated with the program. PhD students must maintain geographical proximity to the campus until they have passed their field examinations but no longer than a period of two years.

- **Comprehensive examinations.** At the beginning of their programs, students consult with their supervisor and the Associate Chair, Graduate to determine their fields. Two options are available: two majors **or** one major and two minors. Major fields should coincide with the subject area(s) that the student has chosen for the thesis. Minors should be in different areas. The comprehensive field examinations consist of a written examination in each field and a common oral examination covering all fields. Students are required to take their field examinations by the spring of Year 2, but they are strongly advised to take them as soon as possible after the completion of their coursework. Examinations are held in January and April. Examinations cannot be postponed beyond the spring of Year 2 without permission of the Associate Chair, Graduate. The department's website lists the fields offered.
- **Language requirements** vary with the student's major area of study. If not already so qualified, a student must qualify in one language other than English normally by the beginning of Year 2 and no later than 12 months after the successful completion of the comprehensive examinations and may be asked to qualify in other program-related languages. All language requirements are subject to the approval of the Associate Chair, Graduate.
- **Thesis:** When all of the above requirements are completed, the candidate will proceed to write the PhD thesis and defend it at a Doctoral Final Oral Examination. The thesis must be a piece of original scholarship, approximately 350 pages (90,000 words) in length, exclusive of notes and bibliography. Thesis preparation is guided by a committee consisting of the major supervisor and two other faculty members. The thesis must be presented within six years of first enrolment in the full-time PhD program.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of History's additional admission requirements stated below.
- Exceptional applicants may enter the PhD program by direct entry from the BA with an A– average or better.
- Applicants must satisfy the department of their ability to do independent research at an advanced level.
- In addition to the School of Graduate Studies online application form, applicants must submit:
  - an Application Information Form
  - three letters of recommendation
  - a 500-word specific research proposal outlining a precise field and area of historical investigation
  - a writing sample of no more than 6,000 words.
- Applicants who were educated outside Canada, whose primary language is not English, and who graduated from a university where the language of instruction was not English must demonstrate proficiency in the English language through the successful completion of a recognized English-language proficiency examination as outlined in the School of Graduate Studies General Regulations.

Completion Requirements

- **Coursework**. By **direct entry**: students must successfully complete a total of **4.5 full-course equivalents (FCEs)**, 0.5 of which must be HIS1997H *The Practice of History*. Students must maintain an A– average in their first 2.0 FCEs in order to continue in the program.
- **Residence requirement.** Residence means students must be in such geographical proximity as to be able to visit the campus regularly and participate fully in the University's activities associated with the program. PhD students must maintain geographical proximity to the campus until they have passed their field examinations but no longer than a period of two years.
- **Comprehensive examinations.** At the beginning of their programs, students consult with the Associate Chair, Graduate to determine their fields, and students will be assigned advisors. Two options are available: two majors or one major and two minors. Major fields should coincide with the subject area(s) that the student has chosen for the thesis. Minors should be in different areas. The comprehensive field examinations consist of a written examination in each field and a common oral examination covering all fields. Students are required to take their field examinations by the spring of Year 3, but they are strongly advised to take them as soon as possible after the completion of their coursework. Examinations are held in January and April. Examinations cannot be postponed beyond the spring of Year 3 without permission of the Associate Chair, Graduate. The department's website lists the fields offered.
- **Language requirements** vary with the student's major area of study. If not already so qualified, a student must qualify in one language other than English normally by the beginning of Year 3 and no later than 12 months after the successful completion of the comprehensive examinations and may be asked to qualify in other program-related languages. All language requirements are subject to the approval of the Associate Chair, Graduate.
- **Thesis**: When all of the above requirements are completed, the candidate will proceed to write the PhD thesis and defend it at a Doctoral Final Oral Examination. The thesis must be a piece of original scholarship, approximately 350 pages (90,000 words) in length, exclusive of notes and bibliography. Thesis preparation is guided by a committee consisting of the major supervisor and two other faculty members. The thesis must be presented within seven years of first enrolment in the direct-entry PhD.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

History: History MA, PhD Courses

Not all courses are offered every year. Please consult the department's list of current course offerings.

Course Code	Course Title
HIS1001H	Topics in History
HIS1003H	Theory and History
HIS1004H	History and Biopolitics
HIS1005H	Reading Queer and Trans Histories of North America
HIS1007H	Theories, Histories, Imaginaries: Themes in Technoscience
HIS1008H	The Practice of Public History and Archival Research
HIS1009H	Empire and Governmentality: Economy, Culture, and Liberal Governance
HIS1010H	New Historiographies of Capitalism: Globality and Making Space, Time, Subjects
HIS1011H	Queer and Trans Oral History
HIS1012H	Indigenous and Decolonial Science and Technology Studies
HIS1013H	Intellectuals and Decolonization
HIS1014H	Neoliberalism in North America
HIS1015H	Oral History Theory and Practice
HIS1016H	Historical Readings in Gender and Sexuality
HIS1017H	History and Social Media: Critical Histories for Big Publics
HIS1018H	History as Creative Nonfiction
HIS1019H	Science, Nature, and Empire
HIS1021H	Environment and History
HIS1022H	Animals, Culture, and History
HIS1031H	Images as History: Photography, Historical Method, and Conceptualizing Visuality
HIS1032H	Modernity and Its Visual Cultures
HIS1040H	Maps in History: Power and Identity, Conflict and Imagination
HIS1106H	Topics in Canadian Social History
HIS1117H	Canada: Colonialism/Postcolonialism
HIS1118H	Canada By Treaty: Alliances, Title Transfers, and Land Claims
HIS1142Y	Canadian Foreign Relations, 1940–2003
HIS1168H	History of the Sex Trade in Canadian and Comparative Contexts
HIS1180H	Race in the USA and Canada
HIS1200H	Readings in European Intellectual History
HIS1203H	Jus Commune
HIS1204H	Topics in Medieval Church History
HIS1205H	The Communist Experience in Central and Eastern Europe
HIS1213H	Medieval Institutes of Perfection
HIS1215H	Social Change in Medieval England, 1154–1279
HIS1221H	Topics in Early Modern European Social History
HIS1228H	Revolutions in History: The Annales School in Context
HIS1232H	European Colonialism, 1870–1970: A Comparative History
HIS1233H	Colonial Urbanism in the Mediterranean World, 1800–1950
HIS1234H	Readings in Early Modern French History
HIS1235H	Histories in the Mediterranean: From Braudel to Post-Colonialism
HIS1236H	Modern French Colonial History
HIS1237H	France: 1870–1968
HIS1245H	Gender in Europe 1500–1950
HIS1265H	Atrocities and Memory in Postwar Europe and North America
HIS1268H	The Holocaust and World War II
HIS1269H	The Social History of Medicine in the Nineteenth and Twentieth Centuries
HIS1272H	Topics in Twentieth-Century European History
HIS1273H	Taking the Waters: Spas and Water Cures in History
HIS1275H	Imperial Germany, 1871–1918
HIS1278H	Topics in 20th C German History
HIS1279H	World War II in East Central Europe
HIS1281H	History of Real Socialism
HIS1286H	Categories of Imperial Russian Social History
HIS1287H	Polish Jews Since the Partitions of Poland
HIS1288H	Russia's Empire
HIS1289H	The Cold War Through Its Archives
HIS1290H	Topics in Imperial Russian History
HIS1296H	Stalinism and After: Beyond Cold War History
HIS1301H	History of Food and Drink

Course Code	Course Title
HIS1416H	Early Modern English Popular Culture, 1500–1800
HIS1435H	Studies in Victorian Society
HIS1441H	Ireland, Race, and Empires
HIS1531H	American Political History Since 1877
HIS1532H	American Foreign Policy in the Cold War
HIS1533H	Gender and International Relations
HIS1538H	Reading in U.S. History
HIS1555H	Gender and Slavery in the Atlantic World, 17th to 19th Century
HIS1662H	Rethinking Modernity Through Japan
HIS1664H	Religion and Society in Southeast Asia
HIS1673H	Critical Historiography of Late Imperial and Modern China
HIS1675H	Imperial Circulation and Diasporic Flows in the British Empire
HIS1677H	Empire and Nation in Modern East Asia
HIS1678H	War and Memory in Twentieth-Century East Asia
HIS1702H	Colonial Violence: Comparative Histories
HIS1704H	Colloquium in Latin American and Caribbean History
HIS1705H	Trends in Women and Gender History in the Global South
HIS1707H	Topics in African History
HIS1708H	Space and Power in Modern Africa
HIS1710H	Slave Emancipation in the Atlantic World
HIS1712H	Topics on the History of Ethiopia
HIS1725H	Topics in Latin American History: Race, Gender, and Citizenship
HIS1783H	Jews of the Premodern Islamic World
HIS1784H	The Islamic Revolution
HIS1785H	International Relations in the Middle East
HIS1786H	The Middle East and Europe in 19th-Century Travel Literature
HIS1800H	Global Histories of the Archives
HIS1802H	Slavery in North America
HIS1805H	Human Rights and Empire
HIS1806H	Histories of the Carceral State
HIS1810H	Indigenous Economies and Imperialism
HIS1820H	Law, Space, and History
HIS1825H	Changing Skylines: (Re)mapping Urban History in the Global Age
HIS1830H	Critical Approaches to Historical Anthropology
HIS1860H	Global Rights: A Critical History
HIS1890H	Regimes of Value
HIS1900H	History in International Affairs
HIS1901H	Approaches and Methodologies in Contemporary International History
HIS1997H	The Practice of History
HIS1998H	Reading Course
HIS1999H	Reading Course
HIS2000Y	Directed Research
JHL1282H	Comparative Totalitarian Culture

Cross-Listed Courses

Course Code	Course Title
BKS2000H	Advanced Seminar in Book History and Print Culture
CIN3008H	Topics in Film and Media History
ERE1175H	One Hundred Years of Cultures of Refugees in Europe, 1920–2020
FAH1965H	The Sixties Revisited
JHL1680H	Revolutionary Women's Cultures in East Asia, Early to Mid 20th Century
MST3123H	Introduction to Medieval Medicine
MST3237H	Monastic Rules and Customaries
MST3253H	Medieval Sicily
HPS4110H	Medicine, Science, and Mobility in the Mediterranean World
WGS1021H	Black Diaspora Feminisms, Modernity, Freedom, Belonging
WGS1031H	Gendering Racial Capitalism

Other Departments

Students may take courses from other departments for graduate history credit with permission of the Associate Chair, Graduate. Interested students should consult the appropriate calendar entries and departmental websites for current course offerings.

History and Philosophy of Science and Technology

HPST: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

History and Philosophy of Science and Technology

MA and PhD

- Fields:
  - History of Mathematics and Physical Sciences;
  - History of Medicine and Life Sciences;
  - History of Technology;
  - Philosophy of Science

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Book History and Print Culture**
  - History and Philosophy of Science and Technology, MA, PhD
- **Sexual Diversity Studies**
  - History and Philosophy of Science and Technology, MA, PhD

Overview

The Institute for the History and Philosophy of Science and Technology (IHPST) conducts research, offers advanced studies programs, and serves as a focus for University-wide interest in its field.

Courses are open to all graduate students and are suitable complements for specialists in science or the humanities. Students are encouraged to participate in the IHPST colloquia, which are open to the University of Toronto community.

Contact and Address

Web: www.ihpst.utoronto.ca
Email: ihpst.info@utoronto.ca

Telephone: (416) 978-5397
Fax: (416) 978-3003

Institute for the History and Philosophy of Science and Technology (IHPST)
University of Toronto
Old Victoria College, Room 316, 91 Charles Street West
Toronto, Ontario M5S 1K7 Canada

HPST: Graduate Faculty

Full Members

Baigrie, Brian - BA, MA, PhD
Berkovitz, Joseph - BSc, MA, PhD
Birn, Anne-Emanuelle - BA, MA, DSc
Burton, Elise K. - BA, AM, PhD
Dacome, Lucia - BA, MPH, PhD
Dyck, Erika - BA, BA, MA, PhD
Fehige, Yiftach - BSc, MPH, MTh, DTh, PhD
Gingras, Yves - BSc, MSc, PhD
Goldenberg, Maya - BA, MA, PhD
Hoover, Kevin - AB, BA, DPhil
Jones-Imhotep, Edward - BA, PhD ***(Director)***
Krementsov, Nikolai - PhD
McEwen, Rhonda - PhD
McLaughlin, Neil - BA, MA, PhD
Misak, Cheryl - BA, MA, DPhil, FRSC
Mossio, Matteo - PhD
Richmond, Scott - BA, PhD
Russon, John - BA, MA, PhD
Satsuka, Shiho - BA, BA, MA, PhD
Smeenk, Chris - BA, MS, MA, PhD
Solovey, Mark - BA, MA, AM, PhD
Upshur, Ross Edward - BA, MA, MSc, MD
Vicedo Castello, Marga - BA, MA, PhD, PhD
Vold, Karina - BA, PhD
Walsh, Denis - BA, BSc, MPH, PhD, PhD
Woods, Rebecca - BA, MA, PhD
Yeang, Chen-Pang - BS, SM, PhD, ScD
Zakar, Adrien - MA, PhD

Members Emeriti

Fraser, Craig - BA, MA, PhD
Seager, William Edward - BA, MA, PhD
Thompson, Paul - BA, MA, PhD

Associate Members

Lamb, Susan - BFA, MA, PhD
Maddalena, Kate - BA, MA, PhD
Mitchell, Mary - BA, JD, MA, PhD
Nath, Anjali - BA, MA, PhD
Rini, Regina - BA, MA, PhD
Schotte, Margaret - AB, MA, MA, PhD

HPST: History and Philosophy of Science and Technology MA

Admission to the **Master of Arts (MA) program** is highly selective and competitive. Acceptance is based on a combination of grades, references, academic and professional accomplishments, areas of interest, and a sample of written work. The IHPST website contains detailed instructions for completing admission applications. Applications must be accompanied by transcripts, a statement of interest, letters of reference, a curriculum vitae, and a writing sample.

Applicants who wish to take one or more of the courses offered by IHPST as non-degree students should apply for admission as Special Students. The application procedures are the same as for those of the MA program, but the deadline for applications is May 1.

A student's curriculum is arranged in consultation with the student's faculty advisor and the Director of Graduate Studies. Students make course choices consistent with a commitment to either:

- One of the three history fields (History of Mathematics and Physical Sciences; History of Medicine and Life Sciences; History of Technology), **or**
- The philosophy field (Philosophy of Science).

The MA program can be taken on a full-time or part-time basis.

HPST: History and Philosophy of Science and Technology MA; Field: History of Medicine and Life Sciences

MA Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy IHPST's additional admission requirements stated below.
- A bachelor's degree from a recognized university with an average grade of at least B+ in the final two years of undergraduate work. While the majority of accepted students exceed this standard, the very broad scope of the field and the variety of fruitful approaches to it also imply that many different backgrounds are appropriate. Accordingly, grades are only one criterion used to judge applicants.
- Applications must be accompanied by a 300- to 500-word statement of interest indicating the applicant's areas of interest in history and/or philosophy of science and technology at the graduate level. A writing sample of no more than 3,000 words (not to exceed 20 pages) is required.
- Application deadline is January 15 of every year.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction is not English must submit results of the Test of English as a Foreign Language (TOEFL) and Test of Written English (TWE) with the following minimum scores:
  - Paper-based TOEFL: 580 and 5 on the TWE
  - Internet-based TOEFL: 93/120 and 22/30 on the writing and speaking sections

Completion Requirements

- **Coursework.** Students must complete a minimum of **3.0 full-course equivalents (FCEs)**. A student's curriculum is arranged in consultation with the student's faculty advisor and the Director of Graduate Studies.
  - Complete HPS1000H *Introduction to the History and Philosophy of Science* in the first session
  - Complete 1.0 FCE from the HPS 2000 series:
    - HPS2000H *History of Mathematics*
    - HPS2001H *History of Physics*
    - HPS2003H *History of Biology*
    - HPS2004H *History of Medicine*
    - HPS2008H *History of Psychology*
    - HPS2009H *History and Philosophy of the Social Sciences*
    - HPS2010H *The Sciences of Human Nature*
    - HPS2011H *History of Engineering*
  - Complete 0.5 FCE from the HPS 3000 series:
    - HPS3000H *Philosophy of Science*
    - HPS3001H *The Philosophy of Biology*
    - HPS3002H *The History and Philosophy of Science*
    - HPS3003H *Social Studies of Medicine*
    - HPS3004H *Philosophy of Medicine*
    - HPS3006H *Philosophy of Probability*
    - HPS3007H *Philosophy of Economics*
    - HPS3008H *Philosophy of Science and Religion*
    - HPS3009H *Slavery, Medicine, and Science in Historical Perspective*
    - HPS3010H *Social Epistemology*
  - Complete elective courses (1.0 FCE)
  - Demonstrate a reading knowledge of French or German; language instruction courses are not counted in the 3.0 FCEs required for the degree.
- Students who wish to pursue independent research may take HPS1500H *Research Paper*, in which they carry out a self-initiated research project under the direction of a faculty advisor.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 15 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

HPST: History and Philosophy of Science and Technology MA; Field: History of Mathematics and Physical Sciences

MA Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy IHPST's additional admission requirements stated below.
- A bachelor's degree from a recognized university with an average grade of at least B+ in the final two years of undergraduate work. While the majority of accepted students exceed this standard, the very broad scope of the field and the variety of fruitful approaches to it also imply that many different backgrounds are appropriate. Accordingly, grades are only one criterion used to judge applicants.
- Applications must be accompanied by a 300- to 500-word statement of interest indicating the applicant's areas of interest in history and/or philosophy of science and technology at the graduate level. A writing sample of no more than 3,000 words (not to exceed 20 pages) is required.
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  - Paper-based TOEFL: 580 and 5 on the TWE
  - Internet-based TOEFL: 93/120 and 22/30 on the writing and speaking sections

Completion Requirements

- **Coursework.** Students must complete a minimum of **3.0 full-course equivalents (FCEs)**. A student's curriculum is arranged in consultation with the student's faculty advisor and the Director of Graduate Studies.
  - Complete HPS1000H *Introduction to the History and Philosophy of Science and Technology* in the first session
  - Complete 1.0 FCE from the HPS 2000 series:
    - HPS2000H *History of Mathematics*
    - HPS2001H *History of Physics*
    - HPS2003H *History of Biology*
    - HPS2004H *History of Medicine*
    - HPS2008H *History of Psychology*
    - HPS2009H *History and Philosophy of the Social Sciences*
    - HPS2010H *The Sciences of Human Nature*
    - HPS2011H *History of Engineering*
  - Complete 0.5 FCE from the HPS 3000 series:
    - HPS3000H *Philosophy of Science*
    - HPS3001H *The Philosophy of Biology*
    - HPS3002H *The History and Philosophy of Science*
    - HPS3003H *Social Studies of Medicine*
    - HPS3004H *Philosophy of Medicine*
    - HPS3006H *Philosophy of Probability*
    - HPS3007H *Philosophy of Economics*
    - HPS3008H *Philosophy of Science and Religion*
    - HPS3009H *Slavery, Medicine, and Science in Historical Perspective*
    - HPS3010H *Social Epistemology*
  - Complete elective courses (1.0 FCE)
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- Students who wish to pursue independent research may take HPS1500H *Research Paper*, in which they carry out a self-initiated research project under the direction of a faculty advisor.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 15 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

HPST: History and Philosophy of Science and Technology MA; Field: History of Technology

MA Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy IHPST's additional admission requirements stated below.
- A bachelor's degree from a recognized university with an average grade of at least B+ in the final two years of undergraduate work. While the majority of accepted students exceed this standard, the very broad scope of the field and the variety of fruitful approaches to it also imply that many different backgrounds are appropriate. Accordingly, grades are only one criterion used to judge applicants.
- Applications must be accompanied by a 300- to 500-word statement of interest indicating the applicant's areas of interest in history and/or philosophy of science and technology at the graduate level. A writing sample of no more than 3,000 words (not to exceed 20 pages) is required.
- Application deadline is January 15 of every year.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction is not English must submit results of the Test of English as a Foreign Language (TOEFL) and Test of Written English (TWE) with the following minimum scores:
  - Paper-based TOEFL: 580 and 5 on the TWE
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    - HPS2011H *History of Engineering*
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    - HPS3008H *Philosophy of Science and Religion*
    - HPS3009H *Slavery, Medicine, and Science in Historical Perspective*
    - HPS3010H *Social Epistemology*
  - Complete elective courses (1.0 FCE)
  - Demonstrate a reading knowledge of French or German; language instruction courses are not counted in the 3.0 FCEs required for the degree.
- Students who wish to pursue independent research may take HPS1500H *Research Paper*, in which they carry out a self-initiated research project under the direction of a faculty advisor.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 15 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

HPST: History and Philosophy of Science and Technology MA; Field: Philosophy of Science

MA Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy IHPST's additional admission requirements stated below.
- A bachelor's degree from a recognized university with an average grade of at least B+ in the final two years of undergraduate work. While the majority of accepted students exceed this standard, the very broad scope of the field and the variety of fruitful approaches to it also imply that many different backgrounds are appropriate. Accordingly, grades are only one criterion used to judge applicants.
- Applications must be accompanied by a 300- to 500-word statement of interest indicating the applicant's areas of interest in history and/or philosophy of science and technology at the graduate level. A writing sample of no more than 3,000 words (not to exceed 20 pages) is required.
- Application deadline is January 15 of every year.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction is not English must submit results of the Test of English as a Foreign Language (TOEFL) and Test of Written English (TWE) with the following minimum scores:
  - Paper-based TOEFL: 580 and 5 on the TWE
  - Internet-based TOEFL: 93/120 and 22/30 on the writing and speaking sections

Completion Requirements

- **Coursework.** Students must complete a minimum of **3.0 full-course equivalents (FCEs)**. A student's curriculum is arranged in consultation with the student's faculty advisor and the Director of Graduate Studies.
  - Complete HPS1000H *Introduction to the History and Philosophy of Science and Technology* in the first session
  - Complete 0.5 FCE from the HPS 2000 series:
    - HPS2000H *History of Mathematics*
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    - HPS2003H *History of Biology*
    - HPS2004H *History of Medicine*
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    - HPS2009H *History and Philosophy of the Social Sciences*
    - HPS2010H *The Sciences of Human Nature*
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    - HPS3008H *Philosophy of Science and Religion*
    - HPS3009H *Slavery, Medicine, and Science in Historical Perspective*
    - HPS3010H *Social Epistemology*
  - Complete elective courses (1.0 FCE)
  - Demonstrate proficiency in introductory logic, a reading knowledge of French, or a reading knowledge of German; logic and language instruction courses are not counted in the 3.0 FCEs required for the degree.
- Students who wish to pursue independent research may take HPS1500H *Research Paper*, in which they carry out a self-initiated research project under the direction of a faculty advisor.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 15 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

HPST: History and Philosophy of Science and Technology PhD

Admission to the **Doctor of Philosophy (PhD) program** is highly selective and competitive. Acceptance is based on a combination of grades, references, academic and professional accomplishments, areas of interest, and a sample of written work. The IHPST website contains detailed instructions for completing admission applications. Applications must be accompanied by transcripts, a statement of interest, letters of reference, a curriculum vitae, and a writing sample. The application deadline is January 15 of every year.

Applicants must be admitted via one of the following routes: 1) following completion of a master's degree in History and Philosophy of Science and Technology or 2) direct entry following completion of an appropriate bachelor's degree.

With the approval of the Director of Graduate Studies, some applicants may be admitted to a flexible-time PhD option. This option will benefit mature students who remain active in their professional careers during the PhD, such as physicians, engineers, educators, and IT professionals. The option will enable them to engage in supervised research in the history and/or philosophy of their profession.

Applicants who wish to take one or more of the courses offered by IHPST as non-degree students should apply for admission as Special Students. The application procedures are the same as for those of the MA program, but the deadline for applications is May 1.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy IHPST's additional admission requirements stated below.
- A University of Toronto **master's degree** in History and Philosophy of Science and Technology or its equivalent from a recognized university with an average grade of at least an A– in the applicant's program and with no individual grade less than B+. While the majority of accepted students exceed this standard, the very broad scope of the field and the variety of fruitful approaches to it also imply that many different backgrounds are appropriate. Accordingly, grades are only one criterion used to judge applicants.
- Applications must be accompanied by a 300- to 500-word statement of interest indicating the applicant's areas of interest in history and/or philosophy of science and technology at the graduate level. A writing sample of no more than 3,000 (not to exceed 20 pages) words is required.
- Applicants whose primary language is not English and who are not graduates of a university whose language of instruction is English must submit results of the Test of English as a Foreign Language (TOEFL) and Test of Written English (TWE) with the following minimum scores:
  - Paper-based TOEFL: 580 and 5 on the TWE or
  - Internet-based TOEFL: 93/120 and 22/30 on the writing and speaking sections.

Completion Requirements

- Students admitted on the basis of a **master's degree** must:
  - Complete **3.0 full-course equivalents (FCEs)**; a student whose MA degree does not exhibit sufficient breadth is required to take additional courses.
  - Make course choices consistent with a commitment to either:
    - **One of the three history fields** (History of Mathematics and Physical Sciences; History of Medicine and Life Sciences; History of Technology); **or**
    - **The philosophy field** (Philosophy of Science).
- Arrange the balance of their curriculum in consultation with the Director of Graduate Studies and faculty instructors.
- Submit a **proposal for an advanced research paper** (required for HPS1100Y) by end of Year 1 for students who enter with a master's degree.
- Students are responsible for ensuring that they have an appropriate supervisor. All supervision arrangements are reviewed and approved by the Director of Graduate Studies who assists in the search for a supervisor, if necessary. Proper supervision is a prerequisite for continuation in the program.
- Maintain a cumulative average of at least A– with no individual grade less than B+. In addition, all students should receive at least an A– on the HPS1100Y *Advanced Research Paper*. Students falling below these standards may be recommended for termination from the program.
- Pass a **qualifying examination** by May 30 of Year 2 in areas related to the field of expected research. Examination is conducted by the student's specialist committee, normally three faculty members.
- Pass a **research requirement** by August 31 of Year 3 as determined by the Director of Graduate Studies in consultation with the student's supervisory committee. This may be satisfied through:
  - reading knowledge of a language(s) other than English if needed to carry out the research and writing of the dissertation;
  - familiarity with research methods that are required to successfully complete the writing of the dissertation not typical of IHPST (for example, randomized control trials, cohort studies, mathematical modelling); or
  - additional coursework as determined by the Director of Graduate Studies.
- Submit a **thesis proposal** approved by the student's thesis supervisory committee and the Director of Graduate Studies.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy IHPST's additional admission requirements stated below.
- An appropriate **bachelor's degree** from a recognized university, with an average grade of at least a B+ in the applicant's overall program and of at least an A– in the applicant's final two years of study.
- Applications must be accompanied by a 300- to 500-word statement of interest indicating the applicant's areas of interest in history and/or philosophy of science and technology at the graduate level. A writing sample is required.
- Applicants whose primary language is not English and who are not graduates of a university whose language of instruction is English must submit results of the Test of English as a Foreign Language (TOEFL) and Test of Written English (TWE) with the following minimum scores:
  - Paper-based TOEFL: 580 and 5 on the TWE
  - Internet-based TOEFL: 93/120 and 22/30 on the writing and speaking sections.

Completion Requirements

- Students admitted on the basis of a **bachelor's degree** (direct-entry) must:
  - Complete **6.0 full-course equivalents (FCEs)** in total; of these, students must complete all of the MA program requirements including language proficiency, normally in Year 1.
  - Complete all required courses by the end of Year 2. The exception is HPS1100Y *Advanced Research Paper*, which should be completed at the end of Year 3.
  - Make course choices consistent with a commitment to either:
    - **One of the three history fields** (History of Mathematics and Physical Sciences; History of Medicine and Life Sciences; History of Technology); **or**
    - **The philosophy field** (Philosophy of Science).
- Arrange the balance of their curriculum in consultation with the Director of Graduate Studies and faculty instructors.
- Submit a **proposal for an advanced research paper** (required for HPS1100Y), by end of Year 2.
- Students are responsible for ensuring that they have an appropriate supervisor. All supervision arrangements are reviewed and approved by the Director of Graduate Studies who assists in the search for a supervisor, if necessary. Proper supervision is a prerequisite for continuation in the program.
- Maintain a cumulative average of at least A– with no individual grade less than B+. In addition, all students should receive at least an A– on the HPS1100Y *Advanced Research Paper (Required for all students)*. Students falling below these standards may be recommended for termination from the program.
- Pass a **qualifying examination** by May 30 of Year 3 in areas related to the field of expected research. Examination is conducted by the student's specialist committee, normally three faculty members.
- Pass a **research requirement** by August 31 of Year 4 as determined by the Director of Graduate Studies in consultation with the student's supervisory committee. This may be satisfied through:
  - reading knowledge of a language(s) other than English if needed to carry out the research and writing of the dissertation;
  - familiarity with research methods that are required to successfully complete the writing of the dissertation not typical of IHPST (for example, randomized control trials, cohort studies, mathematical modelling); or
  - additional coursework as determined by the Director of Graduate Studies.
- Submit a **thesis proposal** approved by the student's thesis supervisory committee and the Director of Graduate Studies.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Flexible-Time)

Minimum Admission Requirements

- Applicants to the flexible-time PhD option are accepted under the same admission requirements as applicants to the full-time PhD option.
- Students will be admitted on the basis of a master's degree in History and Philosophy of Science and Technology; admission based on a bachelor's degree is not available.
- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy IHPST's additional admission requirements stated below.
- A University of Toronto **master's degree** in History and Philosophy of Science and Technology or its equivalent from a recognized university with an average grade of at least an A– in the applicant's program and with no individual grade less than B+. While the majority of accepted students exceed this standard, the very broad scope of the field and the variety of fruitful approaches to it also imply that many different backgrounds are appropriate. Accordingly, grades are only one criterion used to judge applicants.
- Applications must be accompanied by a 300- to 500-word statement of interest indicating the applicant's areas of interest in history and/or philosophy of science and technology at the graduate level. A writing sample is required.

- Applicants whose primary language is not English and who are not graduates of a university whose language of instruction is English must submit results of the Test of English as a Foreign Language (TOEFL) and Test of Written English (TWE) with the following minimum scores:
  - Paper-based TOEFL: 580 and 5 on the TWE or
  - Internet-based TOEFL: 93/120 and 22/30 on the writing and speaking sections.

Completion Requirements

- Program requirements for the flexible-time option are identical to those for the full-time PhD program, except that the program of study will relate to the student's work and vice versa.
- Students in the flexible-time option are required to register full-time for the first four years of the program. Thereafter, they may register part-time.
- Transfers between the full-time PhD program and the flexible-time PhD option are not permitted.
- Students in the flexible-time option must satisfy the SGS General Regulations and Degree Regulations in the *SGS Calendar*, including good academic standing, supervision, and candidacy regulations.
- The student will develop a **thesis proposal**, which must be approved by the student's thesis supervisory committee and the Director of Graduate Studies.
- Students admitted on the basis of a **master's degree** must:
  - Complete **3.0 full-course equivalents (FCEs)**; a student whose MA degree does not exhibit sufficient breadth is required to take additional courses.
  - Make course choices consistent with a commitment to either:
    - **One of the three history fields** (History of Mathematics and Physical Sciences; History of Medicine and Life Sciences; History of Technology); **or**
    - **The philosophy field** (Philosophy of Science).
- Arrange the balance of their curriculum in consultation with the Director of Graduate Studies and faculty instructors.
- Submit a **proposal for an advanced research paper** (required for HPS1100Y), by the end of Year 1.
- Students are responsible for ensuring that they have an appropriate supervisor. All supervision arrangements are reviewed and approved by the Director of Graduate Studies who assists in the search for a supervisor, if necessary. Proper supervision is a prerequisite for continuation in the program.
- Maintain a cumulative average of at least A– with no individual grade less than B+. In addition, all students should receive at least an A– on the HPS1100Y *Advanced Research Paper (Required for all students)*. Students falling below these standards may be recommended for termination from the program.
- Pass a **qualifying examination** by May 30 of Year 2 in areas related to the field of expected research. Examination is conducted by the student's specialist committee, normally three faculty members.
- Pass a **research requirement** by August 31 of Year 3 as determined by the Director of Graduate Studies in consultation with the student's supervisory committee. This may be satisfied through:
  - reading knowledge of a language(s) other than English if needed to carry out the research and writing of the dissertation;
  - familiarity with research methods that are required to successfully complete the writing of the dissertation not typical of IHPST (for example, randomized control trials, cohort studies, mathematical modelling); or
  - additional coursework as determined by the Director of Graduate Studies.
- Submit a thesis proposal approved by the student's thesis supervisory committee and the Director of Graduate Studies.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

HPST: History and Philosophy of Science and Technology MA, PhD Courses

Not all courses are offered every year. Consult IHPST regarding course offerings.

History and Philosophy of Science and Technology

Course Code	Course Title
HPS1000H	Introduction to the History and Philosophy of Science (proseminar: required for MA students, optional for PhD students)
HPS1001H	Individual Reading and Research in History and Philosophy of Science and Technology
HPS1002H	Individual Reading and Research in History and Philosophy of Science and Technology
HPS1003H	Individual Reading and Research in History and Philosophy of Science and Technology
HPS1100Y	Advanced Research Paper (required for all students)
HPS1500H	Research Paper
HPS2000H	History of Mathematics
HPS2001H	History of Physics
HPS2003H	History of Biology
HPS2004H	History of Medicine
HPS2008H	History of Psychology
HPS2009H	History and Philosophy of the Social Sciences
HPS2010H	The Sciences of Human Nature
HPS2011H	History of Engineering

Course Code	Course Title
HPS3000H	Philosophy of Science
HPS3001H	The Philosophy of Biology
HPS3002H	The History and Philosophy of Science
HPS3003H	Social Studies of Medicine
HPS3004H	Philosophy of Medicine
HPS3006H	Philosophy of Probability
HPS3007H	Philosophy of Economics
HPS3008H	Philosophy of Science and Religion
HPS3009H	Slavery, Medicine, and Science in Historical Perspective
HPS3010H	Social Epistemology
HPS4001H	The Scientific Revolution: Galileo to Newton
HPS4007H	Body, Medicine, and Society in Early Modern Europe
HPS4011H	Cognitive Technologies: Philosophical Issues and Debates
HPS4012H	Situated Cognition
HPS4020H	Postcolonialism and the Global Turn in Science and Technology Studies
HPS4021H	Feminist Approaches to Science and Technology Studies
HPS4023H	Brave New Worlds: Science + Fiction
HPS4030H	Multiple Realizability: History, Science, and Philosophy
HPS4040H	Computing and Information from Babbage to AI
HPS4103H	The Technological Underground: New Methods in History of Technology
HPS4110H	Medicine, Science, and Mobility in the Mediterranean World
HPS4300H	The Historian's Craft: Sources, Methods, and Approaches
HPS4512H	Thought Experiments
HPS4600H	Topics in the Philosophy of Science

Outside Courses of Possible Interest

Check with individual departments for course availability during the academic year.

Book History and Print Culture

Course Code	Course Title
BKS1001H	Introduction to Book History
BKS1002H	Book History in Practice
BKS2000H	Advanced Seminar in Book History and Print Culture

Immunology

Immunology: Introduction

Faculty Affiliation

Medicine

Degree Programs

Immunology

MSc

- Fields:
  - Applied Immunology;
  - Fundamental Immunology

PhD

- Field:
  - Fundamental Immunology

Combined Degree Programs

MD / PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Developmental Biology**
  - Immunology, MSc, PhD
- **Neuroscience**
  - Immunology, PhD
- **Resuscitation Sciences** (admissions have been administratively suspended)
  - Immunology, MSc, PhD
- **Sexual Diversity Studies**
  - Immunology, PhD
- **Women's Health**
  - Immunology, MSc, PhD

Overview

The Department of Immunology provides a common forum for investigators in many areas of the University of Toronto and an interdisciplinary research experience in immunology. Members and students in the department are located on the St. George campus at the Medical Sciences Building, and on the University's Mississauga and Scarborough campuses; the Ontario Cancer Institute; and the research institutes of Mount Sinai Hospital, Toronto General Hospital, Toronto Western Hospital, the Hospital for Sick Children, Women's College Hospital, St. Michael's Hospital, and Sunnybrook Hospital.

Contact and Address

Web: www.immunology.utoronto.ca
Email: graduate.immunology@utoronto.ca
Telephone: (416) 978-6382

Department of Immunology
University of Toronto, Medical Sciences Building
Room 7205, 1 King's College Circle
Toronto, Ontario M5S 1A8 Canada

Immunology: Graduate Faculty

Full Members

Anderson, Michele - BS, PhD
Berger, Stuart - BSc, MSc, PhD
Berinstein, Neil - MD
Brooks, David - BS, PhD
Butler, Marcus - BA, MD
Cybulsky, Myron - MD
Danska, Jayne - AB, PhD
Ehrhardt, Goetz - MS, PhD
Epelman, Slava - MD, DrMed
Fish, Eleanor - BSc, MPH, PhD
Gehring, Adam - BA, PhD
Girardin, Stephen - BSc, PhD
Gommerman, Jennifer - BSc, PhD ***(Chair and Graduate Chair)***
Guidos, Cynthia - BSc, PhD
Hirano, Naoto - MD, PhD
Inman, Robert - BA, MD
Iscove, Norman - MD, PhD
Jeschke, Marc - DrMed, PhD
Julien, Jean-Philippe - PhD
Kaul, Rupert - MD, PhD
MacParland, Sonya - BS, MS, PhD
Mak, Tak - BSc, MSc, PhD
Mallevaey, Thierry - MSc, PhD ***(Associate Chair, Graduate Studies)***
Martin, Alberto - BSc, MSc, PhD
McGaha, Tracy Lynn - BSc, MS, PhD
Miron, Veronique - PhD
Mortha, Arthur - MSc, PhD
Ohashi, Pam - BSc, PhD
Ostrowski, Mario - MD
Paige, Christopher - BSc, PhD
Philpott, Dana - BS, PhD
Piguet, Vincent - BM, DrMed, PhD
Radvanyi, Laszlo - BSc, MSc, PhD
Ratcliffe, Michael - PhD
Robbins, Clinton Shane - BS, PhD
Roifman, Chaim - MD
Rottapel, Robert - BA, MD
Sacher, Adrian - DrMed
Serghides, Lena - BSc, PhD
Siminovitch, Katherine - MD
Tikhonova, Anastasia - PhD
Tsui, Florence - BSc, MSc, PhD

Wall, Donna - MD
Watts, Tania - BSc, PhD
Wither, Joan - MD, PhD
Woo, Minna - MD
Yeung, Rae - DrMed, MD
Zhang, Li - MSc, MD, PhD
Zuniga-Pflucker, J.C. - BSc, PhD

Members Emeriti

Julius, Michael - BSc, PhD
Letarte, Michelle - BSc, PhD
Levy, Gary - BSc, MD
Poussier, Philippe - MD
Shulman, Marc - AB, PhD
Wu, Gillian - BSc, MSc, PhD

Associate Members

Amith, Ray - BSc, MSS, PhD
Aung, Aereas - BS, PhD
Edgar, Landon - PhD
Eiwegger, Thomas - MD
Harding, Shane - PhD
Lee, Nana Hyung-Ran - PhD
Maxson, Michelle - PhD
Rojas, Olga Lucia - PhD
Saibil, Samuel - MD, PhD
Singh, Jastaran - BSc, PhD
Tsui, Hubert - BSc, MD, PhD
Wang, Chao - PhD

Immunology: Immunology MSc

The **Master of Science (MSc) program** is offered in two fields:

- The **non-thesis Applied Immunology field** provides advanced training in designing, implementing, and evaluating immunological techniques that measure immune responses.
- The thesis-based Fundamental Immunology field provides advanced training in an area of specialization, with a particular emphasis on the acquisition of experience in the strategies and experimental methods of modern, original, scientific research.

Students in the Applied Immunology field (including the advanced-standing option) are not eligible to participate in collaborative specializations.

Immunology: Immunology MSc Field: Applied Immunology

MSc Program; Field: Applied Immunology

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Immunology's additional admission requirements stated below.
- An appropriate BSc, or its equivalent, normally with at least a B+ average and a strong background in molecular and cellular biology. Applicants lacking adequate training in immunology or biological or natural sciences may be advised to do extra coursework necessary for their research.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements. Applicants educated outside Canada are required to provide Graduate Record Examination (GRE) (general) scores with their application.
- Before starting the program, applicants may be required to complete SCS 3128 (at the discretion of the Department of Immunology).
- Please note that the Applied Immunology field is unable to accept international students at this time.

Completion Requirements

- Students must complete any courses conditional of acceptance.
- **Coursework.** Students must successfully complete a total of **7.0 full-course equivalents (FCEs)** as follows:
  - Year 1:
    - IMM1450Y *Major Research Project in Immunology (I)* and IMM1550Y *Major Research Project in Immunology (II)*
    - 1.0 FCE selected from: IMM1428H *Molecular Immunology*, IMM1429H *Developmental Immunology*, *IMM1430H Clinical Immunology*, IMM1431H *Immunotherapy*
    - IMM1436H *Techniques in Immunology*
  - Year 2:
    - IMM1050H *Easton Seminar Series (I)* and IMM1075H *Special Topics in Immunology*
    - IMM1650Y *Major Research Project in Immunology (III)*
    - IMM1651H *Applied Research in Immunology*
    - 1.0 FCE selected from the elective course list below.
- Students are required to participate full-time until the program requirements of research and coursework have been completed.

Elective Courses

Students may take any graduate-level course available to fulfil the elective portion of their degree requirements from Immunology, Biochemistry, Biomedical Engineering, Laboratory Medicine and Pathobiology, Medical Biophysics, Medical Science, Molecular Genetics, Pharmacology and Toxicology, and Physiology.

Students may take a course offered outside the above listed departments towards the elective portion of their degree requirements, but will require the approval of the Associate Chair, Graduate Studies.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

MSc Program; Field: Applied Immunology (Advanced-Standing Option)

Minimum Admission Requirements

- Applicants with an Immunology specialist or major undergraduate degree from the University of Toronto, may be eligible for advanced standing.
- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Immunology's additional admission requirements stated below.
- An appropriate BSc from the University of Toronto (including those with an Immunology specialist or major undergraduate degree), normally with at least a B+ average and a strong background in molecular and cellular biology. Applicants lacking adequate training in immunology or biological or natural sciences may be advised to do extra coursework necessary for their research.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements. Applicants educated outside Canada are required to provide Graduate Record Examination (GRE) (general) scores with their application.
- Applicants must have completed the following University of Toronto undergraduate course or its equivalent: IMM450H1.
- Applicants must have completed the following University of Toronto undergraduate courses: two of IMM428H1, IMM429H1, IMM430H1, IMM431H1, and MIJ485H1.
- Applicants must already have a graduate research supervisor who is a graduate faculty member in the Department of Immunology.
- Please note that the Applied Immunology field (advanced-standing option) is unable to accept international students at this time.

Completion Requirements

- **Coursework.** Successful completion of **5.0 full-course equivalents (FCEs)** as follows:
  - IMM1550Y *Major Research Paper in Immunology (I)*, completed in the first Summer session
  - IMM1650Y *Major Research Paper in Immunology (II)*
  - IMM1050H *Easton Seminar Series (I)*
  - IMM1075H *Special Topics in Immunology*
  - IMM1436H *Techniques in Immunology*
  - IMM1651H *Applied Research in Immunology*
  - 1.0 FCE selected from the elective course list below.

Elective Courses

Students may take any graduate-level course available to fulfil the elective portion of their degree requirements from Immunology, Biochemistry, Biomedical Engineering, Laboratory Medicine and Pathobiology, Medical Biophysics, Medical Science, Molecular Genetics, Pharmacology and Toxicology, and Physiology.

Students may take a course offered outside the above listed departments towards the elective portion of their degree requirements, but will require the approval of the Associate Chair, Graduate Studies.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: S-FWS)
Time Limit: 3 years full-time

Immunology: Immunology MSc Field: Fundamental Immunology

MSc Program; Field: Fundamental Immunology

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Immunology's additional admission requirements stated below.
- An appropriate BSc, or its equivalent, normally with at least a B+ average and a strong background in molecular and cellular biology. Applicants lacking adequate training in biological or natural sciences may be advised to do extra coursework necessary for their research.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements. Applicants educated outside Canada are required to provide Graduate Record Examination (GRE) (general) scores with their application.

Completion Requirements

- **Coursework.** Successful completion of **3.0 full-course equivalents (FCEs)**:
  - IMM1000Y *Recent Advances in Immunology*
  - IMM1200H *Scientific Skills for Immunologists*
  - IMM1025H *Student Seminar Series (I)*
  - IMM1050H *Easton Seminar Series (I)*
  - IMM1075H *Special Topics in Immunology (I)*
- A satisfactory **thesis** embodying the student's research.
- Upon of completion of the thesis, pass an **oral examination**.

Elective Courses

Students may take any graduate-level course available to fulfil the elective portion of their degree requirements from Immunology*, Biochemistry, Biomedical Engineering, Laboratory Medicine and Pathobiology, Medical Biophysics, Medical Science, Molecular Genetics, Pharmacology and Toxicology, and Physiology.

Students may take a course offered outside the above listed departments towards the elective portion of their degree requirements, but will require the approval of the Associate Chair, Graduate Studies.

*Note: students in the MSc field in Fundamental Immunology cannot use IMM1428H, IMM1429H, IMM1430H, IMM1431H, IMM1436H, IMM1450Y, IMM1550H, IMM1650Y, or IMM1651H towards their degree requirements.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Immunology: Immunology PhD

The **Doctor of Philosophy (PhD) degree** is an advanced research degree intended to reflect a level of training consistent with the ability of the candidate to function as an independent research scientist.

Applicants may enter the PhD program via one of three routes: 1) following completion of an MSc degree; 2) transfer from the MSc in Immunology program, Fundamental Immunology field; or 3) direct entry following completion of a BSc degree. The PhD program has one field: **Fundamental Immunology**.

Immunology: Immunology PhD; Field: Fundamental Immunology

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Immunology's additional admission requirements stated below.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements. Applicants educated outside Canada are required to provide Graduate Record Examination (GRE) (general) scores with their application.
- Applicants who have completed an MSc degree must have at least a B+ average in that degree.
- Applicants may be accepted for direct entry with a BSc degree, with at least an A– average in the final two years.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **4.5 full-course equivalents (FCEs)** as follows:
  - IMM1000Y *Recent Advances in Immunology*
  - IMM1200H *Scientific Skills for Immunologists*; in the event the student has taken this course to complete the MSc in Immunology, Fundamental Immunology field, a substitute course will be taken with approval of the Graduate Coordinator
  - IMM2000H *PhD Proposal in Immunology*
  - IMM2025H *Student Seminar Series (II)*
  - IMM2050H *Easton Seminar Series (II)*
  - IMM2075H *Special Topics in Immunology (II)*
  - 1.0 elective FCE at the graduate level from either Immunology or outside the department as relevant to their thesis topic (examples are provided in the elective course list).
- Students must complete a **qualifying exam** within 24 months of starting the PhD program, Fundamental Immunology field.
- Candidates must submit a **thesis** and defend it at a **Doctoral Final Oral Examination** conducted by the School of Graduate Studies.
- Students are required to participate full-time until the program requirements of research and coursework have been completed.

Elective Courses

Students may take any graduate-level course available to fulfil the elective portion of their degree requirements from Immunology*, Biochemistry, Biomedical Engineering, Laboratory Medicine and Pathobiology, Medical Biophysics, Medical Science, Molecular Genetics, Pharmacology and Toxicology, and Physiology.

Students may take a course offered outside the above listed departments towards the elective portion of their degree requirements, but will require the approval of the Associate Chair, Graduate Studies.

*Note: students in the PhD field in Fundamental Immunology cannot use IMM1428H, IMM1429H, IMM1430H, IMM1431H, IMM1436H, IMM1450Y, IMM1550H, IMM1650Y, or IMM1651H towards their degree requirements.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- Transfer applicants must be enrolled in the MSc Immunology program, Fundamental Immunology field.
- Applicants must pass a reclassification (transfer) exam within 24 months of initial registration in the MSc Immunology program, Fundamental Immunology field.
- Successful completion of IMM1200H and IMM1000Y with at least a B+ overall average, prior to taking the reclassification exam.
- Completion of, or concurrent registration in: IMM1025H, IMM1050H, and IMM1075H.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **6.0 full-course equivalents (FCEs)** as follows:
  - IMM1000Y *Recent Advances in Immunology*
  - IMM1025H *Student Seminar Series (I)*
  - IMM1050H *Easton Seminar Series (I)*
  - IMM1075H *Special Topics in Immunology (I)*
  - IMM1200H *Scientific Skills for Immunologists*
  - IMM2000H *PhD Proposal in Immunology*
  - IMM2025H *Student Seminar Series (II)*
  - IMM2050H *Easton Seminar Series (II)*
  - IMM2075H *Special Topics in Immunology (II)*
  - 1.0 elective FCE at the graduate level from either Immunology or outside the department as relevant to their thesis topic (examples are provided in the elective course list).
- Students must successfully complete the **reclassification transfer exam** within 24 months of starting the MSc Immunology program, Fundamental Immunology field.
- Candidates must submit a **thesis** and defend it at a **Doctoral Final Oral Examination** conducted by the School of Graduate Studies.
- Students are required to participate full-time until the program requirements of research and coursework have been completed.

Elective Courses

Students may take any graduate-level course available to fulfil the elective portion of their degree requirements from Immunology*, Biochemistry, Biomedical Engineering, Laboratory Medicine and Pathobiology, Medical Biophysics, Medical Science, Molecular Genetics, Physiology, and Pharmacology and Toxicology.

Students may take a course offered outside the above listed departments towards the elective portion of their degree requirements, but will require the approval of the Associate Chair, Graduate Studies.

*Note: students in the PhD field in Fundamental Immunology cannot use IMM1428H, IMM1429H, IMM1430H, IMM1431H, IMM1436H, IMM1450Y, IMM1550H, IMM1650Y, or IMM1651H towards their degree requirements.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Direct entry is available for highly qualified BSc graduates who completed the undergraduate Immunology specialist program or an appropriate undergraduate program in the life sciences from a recognized university, with a minimum A– average in the final two years and relevant research experience.
- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Immunology's additional admission requirements stated below.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements. Applicants educated outside Canada are required to provide Graduate Record Examination (GRE) (general) scores with their application.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **6.0 full-course equivalents (FCEs)** as follows:
  - IMM1000Y *Recent Advances in Immunology*
  - IMM1200H *Scientific Skills for Immunologists*
  - IMM1025H *Student Seminar Series (I)*
  - IMM1050H *Easton Seminar Series (I)*
  - IMM1075H *Special Topics in Immunology (I)*
  - IMM2000H *PhD Proposal in Immunology*
  - IMM2025H *Student Seminar Series (II)*
  - IMM2050H *Easton Seminar Series (II)*
  - IMM2075H *Special Topics in Immunology (II)*

    - 1.0 elective FCE at the graduate level from either Immunology or outside the department as relevant to their thesis topic (examples are provided in the elective course list).
- Students must complete a **qualifying exam** within 24 months of starting the PhD program, Fundamental Immunology field.
- Candidates must submit a **thesis** and defend it at a **Doctoral Final Oral Examination** conducted by the School of Graduate Studies.
- Students are required to participate full-time until the program requirements of research and coursework have been completed.

Elective Courses

Students may take any graduate-level course available to fulfil the elective portion of their degree requirements from Immunology*, Biochemistry, Biomedical Engineering, Laboratory Medicine and Pathobiology, Medical Biophysics, Medical Science, Molecular Genetics, Physiology, and Pharmacology and Toxicology.

Students may take a course offered outside the above listed departments towards the elective portion of their degree requirements, but will require the approval of the Associate Chair, Graduate Studies.

*Note: students in the PhD field in Fundamental Immunology cannot use IMM1428H, IMM1429H, IMM1430H, IMM1431H, IMM1436H, IMM1450Y, IMM1550H, IMM1650Y, or IMM1651H towards their degree requirements.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Immunology: Courses

Course Code	Course Title
IMM1000Y	Recent Advances in Immunology
IMM1025H	Student Seminar Series (I)
IMM1050H	Easton Seminar Series (I)
IMM1075H	Special Topics in Immunology (I)
IMM1200H	Scientific Skills for Immunologists
IMM1428H	Molecular Immunology
IMM1429H	Developmental Immunology
IMM1430H	Clinical Immunology
IMM1431H	Immunotherapy
IMM1436H	Techniques in Immunology
IMM1450Y	Major Research Project in Immunology (I)
IMM1550Y	Major Research Project in Immunology (II)
IMM1650Y	Major Research Project in Immunology (III)
IMM1651H	Applied Research in Immunology
IMM2000H	PhD Proposal in Immunology
IMM2025H	Student Seminar Series (II)
IMM2050H	Easton Seminar Series (II)
IMM2075H	Special Topics in Immunology (II)
IMM2200H	Graduate Professional Development 2.0
IMM2300Y	Immunology Preprint Article Review Club
IMM2400H	Translational Immunology
IMM2500H	Recent Advances in Clinical Immunology

Industrial Relations and Human Resources

IRHR: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Industrial Relations and Human Resources

MIRHR

PhD

- Field:
  - Canadian Industrial Relations and Human Resources

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Ethnic, Immigration and Pluralism Studies**
  - Industrial Relations and Human Resources, MIRHR, PhD
- **Workplace Learning and Social Change**
  - Industrial Relations and Human Resources, MIRHR, PhD

Overview

In addition to faculty directly appointed to the Centre for Industrial Relations and Human Resources (CIRHR), the centre brings together professors from many different disciplines and departments at the University of Toronto to teach and conduct research on all aspects of the workplace and employment relationships. The CIRHR faculty reflect the depth, breadth, and diversity of our university.

Contact and Address

Web: www.cirhr.utoronto.ca
Email: cir.info@utoronto.ca
Telephone: (416) 978-0551
Fax: (416) 978-5696

Centre for Industrial Relations and Human Resources
University of Toronto 121 St. George Street
Toronto, Ontario M5S 2E8 Canada

IRHR: Graduate Faculty

Full Members

Campolieti, Michele - BSc, MA, PhD
Connelly, Brian Samuel - BA, PhD
Dhuey, Elizabeth Ann - BA, MEc, PhD
Distelhorst, Gregory Michael - BA, PhD ***(PhD Coordinator)***
Gomez, Rafael - BA, MA, MIR, PhD ***(Director)***
Krashinsky, Harry - MA, PhD
Langille, Brian A. - BA, BCL, LLB
Latham, Gary - BA, MS, PhD
Macklem, Patrick - BA, LLB, LLM
Myers, Jenna Elizabeth - PhD
Reitz, Jeffrey G. - PhD
Rotundo, Maria - BA, MA, PhD
Saks, Alan - BA, MSc, PhD

Members Emeriti

Gunderson, Morley - BA, MA, PhD
Hyatt, Douglas - BA, MA, PhD
Reid, Frank - BA, MSc, PhD
Verma, Anil - BTech, MBA, PhD

Associate Members

Eads, Alicia - DPhil
Rittich, Kerry - BAMus, LLB, SJD
Sawchuk, Peter - BSc, BEd, MA, PhD

IRHR: Industrial Relations and Human Resources MIRHR

The Master of Industrial Relations and Human Resources (MIRHR) degree program benefits students who are interested in advanced academic study leading to career opportunities in human resources management, labour-management relations, collective bargaining and dispute resolution, organization development and change, and labour market and social policy.

The MIRHR is a professional degree program designed to train students in the latest innovations and best practices within industrial relations and human resources management. The program uses an interdisciplinary approach to provide specialized study of the employment relationship.

The MIRHR offers two program options:

- The two-year MIRHR option allows qualified students to complete the degree program in two years of full-time study.
- The advanced-standing MIRHR option enables qualified students to complete the MIRHR in one year (12 consecutive months) of full-time study.

Both options may be taken on a part-time basis.

MIRHR Program (Two-Year)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the CIRHR additional admission requirements stated below.
- Applicants to the two-year MIRHR program require an appropriate bachelor's degree from a recognized university. A minimum grade average of B+ in each of the final two years of the degree is required.
- Applicants may submit results from the Graduate Record Examination (GRE) or the Graduate Management Admission Test (GMAT). Although these tests are not required and there is no minimum score requirement, this information is helpful to the admissions committee. Test results more than five years old are normally not considered.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must write the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). The following minimum scores are acceptable:
  - paper-based TOEFL exam: 600 and 5 on the Test of Written English (TWE)
  - Internet-based TOEFL exam: 100/120 and 22/30 on the writing and speaking sections
  - IELTS exam: overall score of 7.0 (Academic), with at least 6.5 for each component.
- Since space in the program is limited, all applicants who meet the minimum admission requirements cannot be guaranteed admission. The CIRHR admissions committee reserves the right to select qualified applicants to the program. All admission decisions are final.

Completion Requirements

- Each student's program of courses must be approved by the Coordinator of Graduate Studies. If chosen courses appear to overlap to a large degree, approval may be denied.
- Students must have a mid-B average overall to be recommended for the degree.
- Failure in any course (that is, a grade of less than B–) will require a review of the student's program by the department.
- A student who fails two or more courses is no longer in good academic standing and a recommendation for termination will be made to the School of Graduate Studies.

Year 1: Foundation Courses

- Year 1 is spent acquiring a foundation in industrial relations and human resources and includes courses in economics, human resources management, law, quantitative methods, and organizational behaviour.
- Students must take **4.0 full-course equivalents (FCEs)**, of which 3.5 are required courses, as follows:
  - IRE1002H *Applied Statistics in Industrial Relations*
  - IRE1010H *Economic Foundations of Industrial Relations and Human Resources*
  - IRE1126H *Economics of Labour and Human Resources*
  - IRE1362H *Organizational Behaviour*
  - IRE1609H *Strategic Human Resources Management*
  - IRE1610H *Industrial Relations*
  - plus one of the following law courses:
    - IRE1270H *Law of Labour Relations*
    - IRE1338H *Law in the Workplace*.
- 0.5 FCE is an elective course that is chosen from the list below to fill the requisite 4.0 FCEs in Year 1 of the program.
- Students in the MIRHR program are required to achieve a mid-B average in Year 1 of the program (or in the first 4.0 FCEs) in order to continue or to pass into Year 2.

Year 2: Core Courses

- Students must take **4.0 FCEs** to complete Year 2. This includes core courses in Industrial Relations and Human Resources (1.5 FCEs):
  - IRE2001H *Foundations and Current Issues in Industrial Relations and Human Resources*
  - IRE2002H *Research Methods for Industrial Relations and Human Resources*
  - plus one of the following courses:
    - IRE2003H *Research Project in Industrial Relations and Human Resources*
    - IRE2004H *Data Analytics and Metrics in Industrial Relations and Human Resources*.
- 2.5 FCEs are elective courses that are chosen from the list below to fill the requisite 4.0 FCEs in Year 2 of the program.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time; 6 years part-time

MIRHR Program (Advanced-Standing Option: 12-Month)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Centre for Industrial Relations and Human Resources additional admission requirements stated below.
- Applicants to the 12-month MIRHR advanced-standing option require an appropriate bachelor's degree from a recognized university and significant academic training (normally 2.0 full-course equivalents [FCEs] at the senior undergraduate level), employment relations, human resources, industrial relations, labour studies, or labour economics. If the admissions committee determines that an applicant does not have sufficient academic training to qualify for advanced standing, the student will be considered for the two-year MIRHR degree.

A minimum grade average of B+ in each of the final two years of the degree is required.
- Applicants may submit results from the Graduate Record Examination (GRE) or the Graduate Management Admission Test (GMAT). Although these tests are not required and there is no minimum score requirement, this information is helpful to the admissions committee. Test results more than five years old are normally not considered.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must write the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). The following minimum scores are acceptable:
  - paper-based TOEFL exam: 600 and 5 on the Test of Written English (TWE)
  - Internet-based TOEFL exam: 100/120 and 22/30 on the writing and speaking sections
  - IELTS exam: overall score of 7.0 (Academic), with at least 6.5 for each component.
- Since space in the program is limited, all applicants who meet the minimum admission requirements cannot be guaranteed admission. The CIRHR admissions committee reserves the right to select qualified applicants to the program. All admission decisions are final.

Completion Requirements

- Each student's program of courses must be approved by the Coordinator of Graduate Studies. If chosen courses appear to overlap to a large degree, approval may be denied.
- Students must have a mid-B average overall to be recommended for the degree.
- Failure in any course (that is, a grade of less than B–) will require a review of the student's program by the department.
- A student who fails two or more courses is no longer in good academic standing and a recommendation for termination will be made to the School of Graduate Studies.
- Students admitted into the 12-month MIRHR advanced-standing option will have completed many of the foundation courses in industrial relations and human resources.
- Students will take both foundation and core courses simultaneously in the three sessions of study (September to August). During this time, students will also take elective courses to increase their breadth of knowledge or to focus on their areas of interest.
- Students must take **5.5 full-course equivalents (FCEs)**, of which 3.0 are required courses, as follows:
  - IRE1010H *Economic Foundations of Industrial Relations and Human Resources*
  - IRE1126H *Economics of Labour and Human Resources*
  - IRE2001H *Foundations and Current Issues in Industrial Relations and Human Resources*
  - IRE2002H *Research Methods for Industrial Relations and Human Resources*
  - plus one of the following courses:
    - IRE2003H *Research Project in Industrial Relations and Human Resources*
    - IRE2004H *Data Analytics and Metrics in Industrial Relations and Human Resources*
  - plus one of the following law courses:
    - IRE1270H *Law of Labour Relations*
    - IRE1338H *Law in the Workplace*.
- 2.5 FCEs are elective courses that are chosen from the list below to fill the requisite 5.5 FCEs in the program.
- Students in the MIRHR advanced-standing option are required to achieve a mid-B average in the first 2.5 FCEs of the program in order to continue.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time; 6 years part-time

IRHR: Industrial Relations and Human Resources PhD

The **Doctor of Philosophy (PhD)** degree program benefits students who are interested in advanced academic study leading to career opportunities in human resources management; labour-management relations; collective bargaining and dispute resolution; organization development and change; and labour market and social policy. The PhD program is a research-oriented program of study designed to provide students with a thorough knowledge of the field and strong research skills. Offered only on a full-time basis, students normally fulfil a two-year residency requirement that enables their full participation in the activities associated with the program.

Applicants may enter the PhD program via one of two routes: 1) following completion of an appropriate master's degree or 2) direct entry following completion of a bachelor's degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Centre for Industrial Relations and Human Resources' additional admission requirements stated below.
- Applicants require a master's degree in industrial relations, human resources, economics, sociology, public policy, political science, management, or a related field of study.
- At least a B+ standing, or equivalent, is required in the previous master's program. Academic performance in courses relevant to the applicant's area of interest, as well as performance in statistics and research methods courses are taken into consideration by the admissions committee.
- Applicants are required to submit a copy of their results from the Graduate Record Examination (GRE). Although there is no minimum score requirement, performance on the GRE will be taken into consideration by the admissions committee. Test results more than five years old are normally not considered.

- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must write the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). The following minimum scores are acceptable:
  - paper-based TOEFL exam: 600 and 5 on the Test of Written English (TWE)
  - Internet-based TOEFL exam: 100/120 and 22/30 on both the writing and speaking sections
  - IELTS exam: overall score of 7.0 (Academic), with at least 6.5 for each component.
- Applicants may be required to appear for a personal interview and/or submit copies of recent academic work.

Completion Requirements

Normally, requirements in Years 1 and 2 consist of a core course in Industrial Relations and Human Resources, elective courses, and courses in research methods and statistics.

- Students must take the equivalent of **3.5 full-course equivalents (FCEs)** as follows:
  - The core requirement in Industrial Relations and Human Resources is met by completing:
    - IRE3004H *Field Seminar in Industrial Relations and Human Resources*.
  - The research and statistics requirements are met by completing:
    - IRE3007H *Qualitative Research Methods for Work and Organizations*
    - IRE3008H *Econometrics for Industrial Relations I*
    - IRE3009H *Econometrics for Industrial Relations II*
    - RSM3062H *Methods and Research in Organizational Behaviour*.
  - In cases where a student's prior academic background may have covered any of the courses listed above, substitutions may be permitted with approval of the PhD Coordinator.
  - 1.0 FCE is chosen from the elective courses set out below or from selected offerings in other departments and Faculties.
- Students must enrol in IRE3000H *PhD Workshop in Industrial Relations and Human Resources* for each year of their residency at the Centre.
- As part of their professional training, students are expected to participate in internal and external research seminars hosted by the Centre.
- A **comprehensive examination** is normally written by June 30 of Year 2. It is designed to encourage students to broaden their understanding of industrial relations and human resources, to demonstrate analytical and methodological abilities, and to address current policy issues. The examination is six hours in length and graded as Pass/Fail.
- A student who fails the first attempt at the exam will be permitted one more attempt. Failure of the second attempt will result in a recommendation for program termination.
- Students must complete a **Major Research Paper** before advancing to doctoral candidacy. A faculty advisor will mentor the development and execution of this paper.
- The student's supervisor must approve a written **doctoral thesis proposal** before the student can advance to doctoral candidacy.
- Students will have achieved candidacy upon successful completion of the program requirements above at the end of Year 3 of study.
- Proficiency in **French and/or other languages** will be required when the student's supervisor deems it necessary for dissertation research or when CIRHR deems it necessary for the student's area of research.
- **Thesis and a Doctoral Final Oral Examination** on the thesis.
- The program is available only on a full-time basis and normally has a two-year **residency** requirement, during which time the student is required to participate fully in the department's activities associated with the program.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Centre for Industrial Relations and Human Resources' additional admission requirements stated below.
- Students who hold a bachelor's degree in industrial relations or human resources may be considered for admission to the PhD if they have exceptional academic standing and have demonstrated quantitative skills and research ability. Students will be required to complete additional courses.
- Academic performance in courses relevant to the applicant's area of interest, as well as performance in statistics and research methods courses are taken into consideration by the admissions committee.
- Applicants are required to submit a copy of their results from the Graduate Record Examination (GRE). Although there is no minimum score requirement, performance on the GRE will be taken into consideration by the admissions committee. Test results more than five years old are normally not considered.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must write the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). The following minimum scores are acceptable:
  - paper-based TOEFL exam: 600 and 5 on the Test of Written English (TWE)
  - Internet-based TOEFL exam: 100/120 and 22/30 on both the writing and speaking sections
  - IELTS exam: overall score of 7.0 (Academic), with at least 6.5 for each component.
- Applicants may be required to appear for a personal interview and/or submit copies of recent academic work.

Completion Requirements

- Normally, requirements in Years 1 and 2 consist of a core course in Industrial Relations and Human Resources, elective courses, and courses in research methods and statistics.
- Students must take up to the equivalent of **7.5 full-course equivalents (FCEs)** as follows:
  - The core requirement in Industrial Relations and Human Resources is met by completing:
    - IRE3004H *Field Seminar in Industrial Relations and Human Resources*.
  - The research and statistics requirements are met by completing:
    - IRE3007H *Qualitative Research Methods for Work and Organizations*
    - IRE3008H *Econometrics for Industrial Relations I*
    - IRE3009H *Econometrics for Industrial Relations II*
    - RSM3062H *Methods and Research in Organizational Behaviour*
  - 4.0 FCEs chosen in consultation with the PhD Coordinator.
  - 1.0 FCE is chosen from the elective courses set out below or from selected offerings in other departments and Faculties.
- Students must enrol in IRE3000H *PhD Workshop in Industrial Relations and Human Resources* for each year of their residency at the Centre.
- As part of their professional training, students are expected to participate in internal and external research seminars hosted by the Centre.
- A **comprehensive examination** is normally written by June 30 of Year 3. It is designed to encourage students to broaden their understanding of industrial relations and human resources, to demonstrate analytical and methodological abilities, and to address current policy issues. The examination is six hours in length and graded as Pass/Fail.
- A student who fails the first attempt at the exam will be permitted one more attempt. Failure of the second attempt will result in a recommendation for program termination.
- Students must complete a **Major Research Paper** before advancing to doctoral candidacy. A faculty advisor will mentor the development and execution of this paper.
- The student's supervisor must approve a written **doctoral thesis proposal** before the student can advance to doctoral candidacy.
- Students will have achieved candidacy upon successful completion of the program requirements above at the end of Year 4.
- Proficiency in **French and/or other languages** will be required when the student's supervisor deems it necessary for dissertation research or when CIRHR deems it necessary for the student's area of research.
- **Thesis and a Doctoral Final Oral Examination** on the thesis.
- The program is available only on a full-time basis and normally has a two-year **residency** requirement, during which time the student is required to participate fully in the department's activities associated with the program.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

IRHR: Industrial Relations and Human Resources MIRHR, PhD Courses

Required Courses

Course Code	Course Title
IRE1002H	Applied Statistics in Industrial Relations
IRE1010H	Economic Foundations of Industrial Relations and Human Resources
IRE1126H	Economics of Labour and Human Resources
IRE1270H	Law of Labour Relations
IRE1338H	Law in the Workplace
IRE1362H	Organizational Behaviour
IRE1609H	Strategic Human Resources Management
IRE1610H	Industrial Relations
IRE1700H	HR Consulting Models, Practices, and Applications
IRE2001H	Foundations and Current Issues in Industrial Relations and Human Resources
IRE2002H	Research Methods for Industrial Relations and Human Resources
IRE2003H	Research Project in Industrial Relations and Human Resources
IRE2004H	Data Analytics and Metrics for Industrial Relations and Human Resources
IRE3000H	PhD Workshop in Industrial Relations and Human Resources
IRE3003H	Research Seminar II
IRE3004H	Field Seminar in Industrial Relations and Human Resources
IRE3005H	Workshop in Industrial Relations I
IRE3006H	Workshop in Industrial Relations II
IRE3007H	Qualitative Research Methods in Work and Organizations
IRE3008H	Econometrics for Industrial Relations I
IRE3009H	Econometrics for Industrial Relations II
RSM3062H	Methods and Research in Organizational Behaviour

Elective Courses

The Centre for Industrial Relations and Human Resources (CIRHR) offers key elective courses in both industrial relations and human resources. With the permission of the Graduate Coordinator, students may take courses in other departments and Faculties. Since graduate units give preference to their own students, CIRHR students can enrol in these elective courses only when space is available. Students must meet the standards and requirements of the other departments and Faculties in those courses taken outside CIRHR.

Not all courses are offered every year. The availability of elective courses may be subject to change due to such factors as faculty research leaves and departmental resources. Some courses may be available only in the day or in the evening. Please consult the CIRHR timetable which lists available courses in each session.

Industrial Relations and Human Resources

Course Code	Course Title
IRE1260H	Seminar on Labour Arbitration
IRE1270H	Law of Labour Relations
IRE1338H	Law in the Workplace
IRE1600H	International Developments in Labour and Human Resource Policy
IRE1611H	Sociology of Work and Organizations
IRE1615H	Labour and Globalization
IRE1620H	Labour Relations Problems in Historical Perspective
IRE1625H	Contemporary Issues in Public Sector Labour-Management Relations
IRE1630H	Negotiation Skills, Theory, and Practice
IRE1635H	Collective Bargaining
IRE1640H	Contemporary Trade Unionism: Issues, Challenges, Strategy
IRE1650H	Managing Workplace Conflict
IRE1655H	Health and Safety
IRE1715H	Special Topics in Industrial Relations and Human Resources
IRE1720H	Managing Organizational Change
IRE1725H	Cross Cultural Differences in Organizational Contexts
IRE2021H	Business Strategy for IR/HR
IRE3615H	Performance Management Systems
IRE3635H	Compensation
IRE3640H	Recruitment and Selection
IRE3645H	Training and Development
IRE3650H	Human Resource Planning and Strategy
IRE3655H	Leadership

Reading Courses

In certain circumstances, and with the approval of the Graduate Coordinator, students may be allowed to take a reading or research course:

Course Code	Course Title
IRE1090H	A reading course or individual research in an approved field
IRE2090H	A reading course or individual research in an approved field

Information

Information: Introduction

Faculty Affiliation

Information

Degree Programs

Information

MI

- Concentrations:
  - Archives and Records Management (ARM);
  - Critical Information Policy Studies (CIPS);
  - Culture and Technology (C&T);
  - Human Centred Data Science (HCDS);
  - Information Systems and Design (ISD);
  - Knowledge Management and Information Management (KMIM)**;
  - Library and Information Science (LIS);
  - User Experience Design (UXD)

PhD

- Concentrations:
  - Archives and Records Management (ARM)**;
  - Critical Information Policy Studies (CIPS)**;
  - Cultural Heritage**;
  - Information Systems and Design (ISD)**;
  - Knowledge Management and Information Management (KMIM)**;
  - Library and Information Science (LIS)**;
  - Media, Technology, and Culture (MTC);
  - Philosophy of Information**

** Admissions have been administratively suspended.

Museum Studies

MMSt

Combined Degree Programs

- STG, Law, JD / MI
- STG, MI /MMSt

Diploma Program

Information Studies

GDipISt, a post-master's diploma (admissions have closed)

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Aging, Palliative and Supportive Care Across the Life Course**
  - Information, MI, PhD
- **Book History and Print Culture**
  - Information, MI, PhD
  - Museum Studies, MMSt
- **Environmental Studies**
  - Information, MI, PhD
- **Food Studies**
  - Information, MI
  - Museum Studies, MMSt
- **Jewish Studies**
  - Information, PhD
  - Museum Studies, MMSt
- **Knowledge Media Design**
  - Information, MI, PhD
  - Museum Studies, MMSt
- **Sexual Diversity Studies**
  - Information, MI, PhD
  - Museum Studies, MMSt
- **Women and Gender Studies**
  - Information, MI, PhD

Overview

The Faculty of Information at the University of Toronto is one of the world's most important information and knowledge management schools. Information is studied and tough questions are asked for the benefit of society and the students. Located in the heart of Canada's most diverse and dynamic city, the programs are led by leading researchers and faculty across multiple disciplines and result in exceptional research and career opportunities. The Faculty of Information is the centre for information professions and leaders of research that matters.

People. Information. Technology. They intersect at the Faculty of Information, a launch pad for futures as highly skilled practitioners or researchers. Today's technologies have transformed the way we connect with, shape, and use information. Similar changes have been taking place in the field of museums and cultural heritage.

Contact and Address

Web: ischool.utoronto.ca
General email: inquire.ischool@utoronto.ca
Admissions email: admissions.ischool@utoronto.ca
Telephone: (416) 978-3234

Faculty of Information
University of Toronto 140 St. George Street
Toronto, Ontario M5S 3G6 Canada

Information: Graduate Faculty

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Alexander, Rohan Peter - MEc, PhD
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Battershill, Claire - PhD
Becker, Christoph - BSc, MSc, DSc
Boase, Jeffrey - BA, MA, PhD
Caidi, Nadia - PhD
Caraway, Brett - BA, MA, PhD
Chandra, Priyank - PhD
Chen, Julie Yujie - BA, MA, PhD
Choo, Chun Wei - BA, MSc, PhD
Cohen, Nicole - BA, MA, PhD
Coleman, Beth Malaika - BA, PhD
Cowan, T.L. - BA, MA, PhD
Dallas, Constantinos - BA, MPH, PhD, PhD
Delfanti, Alessandro - PhD
Duff, Wendy - BA, BA, MLS, PhD
Foscarini, Fiorella - PhD
Galey, Alan - PhD
Grimes, Sara - BA, MA, PhD
Guha, Shion - PhD
Hartel, Jenna - PhD
Hassan, Safwat Mohamed Ibrahim - BSc, MSc, PhD
Karppi, Tero Jukka - MA, PhD
Keilty, Patrick - BA, MLIS, PhD
Khovanskaya, Vera - PhD, PhD
Krmpotich, Cara - PhD
Kuzminykh, Anastasia - PhD
Lyons, Kelly - BSc, MSc, PhD
MacNeil, Heather - PhD
McEwen, Rhonda - PhD
Mihalache, Irina - BA, MA, PhD
Mostafa, Javed - PhD ***(Dean)***
Nieborg, David - PhD
Packer, Jeremy - BA, MA, PhD
Phu, Thy - BA, MA, PhD
Rajkumar-Maharaj, Tegan - PhD
Ratto, Matt - PhD
Rault, Jasmine - BA, MA, PhD
Ross, Seamus - BA, MA, DPhil
Shachak, Aviv - PhD
Shade, Leslie - BA, MLIS, PhD
Sharma, Sarah - BA, MA, PhD
Smith, Brian Cantwell - BS, MS, PhD
Smythe, S.A. - MA, PhD
Stanbridge, Alan - BSc, AM, DA
Stevenson, Siobhan - PhD
Yu, Sherry - BA, MA, PhD

Members Emeriti

Clement, Andrew - BSc, MSc, PhD
Craig, Barbara - AM, PhD
Fleming, E. Patricia - BA, BLS, MLS
Howarth, Lynne - BA, MLS, PhD
Williamson, Nancy - BA, BLS, MLS
Yu, Eric - BSc, MMath, PhD

Associate Members

Bernstein, Malayna - PhD
Blas, Zachary - BS, MFA, PhD
Bohaker, Heidi - BA, BEd, MA, DPhil
Brail, Shauna - BA, MA, PhD
Cody, Francis - PhD
Detlor, Brian - PhD
Dionisio, Max Vincent - PhD
Do Nascimento Grohmann, Rafael - BA, MSc, PhD
Elhalaby, Esmat - BA, PhD
Elshakankiri, Maher - PhD
English, Sarah - AM
Ginsburg, Shiphra - MEd, MD
Hemmasi, Farzaneh - PhD
Hewitt, Jeffrey - LLM
Kaplan, Louis - AB, AM, DPhil
Langlois, Ganaele - PhD
Lee, Jamie Ann - PhD
Murphy, M. - BA, PhD
Satsuka, Shiho - BA, BA, MA, PhD
Schotzko, T. Nikki Cesare - PhD
Song, Jesook - BA, PhD
St-Cyr, Olivier - PhD ***(Associate Dean, Teaching and Learning)***
Tang, Tony - PhD
Taylor, Judith - BA, PhD
Wright, James - BA, LMCC, MD, MPH
Yoneyama, Lisa - BA, MA, PhD

Information: Information MI

The **Master of Information (MI) program** allows students to explore the breadth of information, and also to focus on one area of study/concentration.

Students will choose one of the following three options:

- Concentration only,
- Concentration plus a thesis, or
- Concentration plus a co-op (CCO)

Students will be admitted to one of eight concentrations*:

- Archives and Records Management (ARM)
- Critical Information Policy Studies (CIPS)
- Culture and Technology (C&T)
- Human Centred Data Science (HCDS)
- Information Systems and Design (ISD)
- Knowledge Management and Information Management (KMIM)
- Library and Information Science (LIS)
- User Experience Design (UXD)

*Note: students who find themselves on a path to be able to complete a second concentration may submit a request to have the second concentration added to their transcript in the final session of their final year. Contact the Office of the Registrar and Student Services for more details at inquire.ischool@utoronto.ca.

MI Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Application deadlines are available on the Faculty of Information website. Applicants must also satisfy the Faculty's additional admission requirements stated below. Meeting the minimum requirements does not guarantee admission.
- An appropriate bachelor's degree with at least a B average (3.0 GPA) from a university recognized by the University of Toronto.
- The bachelor's degree must normally contain at least 75% academic credits — that is, courses that are not professional, practical, technical, or vocational. Courses such as studio art, drama or music performance, theology, education, or undergraduate courses in library science are not normally considered to be sufficiently academic in content for admission purposes.
- Applicants who have satisfactory standing in an undergraduate program and who have successfully completed information studies graduate courses in programs equivalent to the University of Toronto MI program may also apply for admission with advanced standing. Each application will be evaluated individually. At least 4.0 full-course equivalents (FCEs) towards the MI degree must be taken at the University of Toronto.
- All incoming graduate students must have a good command of English. All applicants educated outside Canada whose primary language is not English must demonstrate proficiency in the English language. This requirement is a condition of admission and must be met before an offer of admission is made. The English language requirement may be satisfied using one of the following tests:
  - Test of English as a Foreign Language (TOEFL) with the following minimum scores:
    - Paper-based TOEFL exam: 600 with 5.5 on the Test of Written English (TWE)
    - Internet-based TOEFL exam: 107/120 with 24/30 on the speaking section and 27/30 on the writing section.
  - International English Language Testing System (IELTS): a minimum required score of 7.5 overall with 7.5 on the writing section and 7.0 on the speaking section.
  - Certificate of Proficiency in English (COPE): a minimum required score of 95 overall with 41 on the writing component, 27 on the reading component, and 27 on the listening component.
  - English Language Program, U of T School of Continuing Studies with an overall score of A in Academic English Level 60.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FW-FW); 11 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Information: Information MI; Concentration: Archives and Records Management

MI Program; Archives and Records Management (Concentration-Only Option)

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
  - 2.5 required FCEs:
    - INF1003H *Information Systems, Services, and Design*
    - INF1330H *Archives Concepts and Issues*
    - INF1331H *Archival Arrangement and Description* **or** INF2186H *Metadata Schemas and Applications*
    - INF2175H *Managing Organizational Records I*
    - INF2184H *Appraisal for Records Retention and Archives Acquisition*
  - 5.5 elective FCEs.
- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FW-FW); 11 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MI Program; Archives and Records Management (Concentration-Plus-Thesis Option)

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
  - Thesis (2.0 FCEs)
  - 2.5 required FCEs:
    - INF1003H *Information Systems, Services, and Design*
    - INF1330H *Archives Concepts and Issues*
    - INF1331H *Archival Arrangement and Description* **or** INF2186H *Metadata Schemas and Applications*
    - INF2175H *Managing Organizational Records I*
    - INF2184H *Appraisal for Records Retention and Archives Acquisition*
  - Research methods course (0.5 FCE)
  - Reading course (0.5 FCE)
  - 2.5 elective FCEs.

- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FW-FW); 11 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MI Program; Archives and Records Management (Concentration-Plus-Co-op Option)

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
  - Co-op (1.0 FCE) plus the Co-op Independent Modules (0.0 FCE)
  - 2.5 required FCEs:
    - INF1003H *Information Systems, Services, and Design*
    - INF1330H *Archives Concepts and Issues*
    - INF1331H *Archival Arrangement and Description* **or** INF2186H *Metadata Schemas and Applications*
    - INF2175H *Managing Organizational Records I*
    - INF2184H *Appraisal for Records Retention and Archives Acquisition*
  - 4.5 elective FCEs.
- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 11 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Information: Information MI; Concentration: Critical Information Policy Studies

Admissions to this concentration have been administratively suspended.

MI Program; Critical Information Policy Studies (Concentration-Only Option)

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
  - 2.5 required FCEs:
    - INF1001H *Knowledge and Information in Society*
    - INF2181H *Information Policy, Regulation, and Law*
    - INF2240H *Political Economy and Cultural Studies of Information*
    - INF2242H *Studying Information and Knowledge Practice*
    - INF2243H *Histories of Information Technologies*
  - 5.5 elective FCEs.
- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FW-FW); 11 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MI Program; Critical Information Policy Studies (Concentration-Plus-Thesis Option)

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
  - Thesis (2.0 FCEs)
  - 2.5 required FCEs:
    - INF1001H *Knowledge and Information in Society*
    - INF2181H *Information Policy, Regulation, and Law*
    - INF2240H *Political Economy and Cultural Studies of Information*
    - INF2242H *Studying Information and Knowledge Practice*
    - INF2243H *Histories of Information Technologies*
  - Research methods course (0.5 FCE)
  - Reading course (0.5 FCE)
  - 2.5 elective FCEs.
- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FW-FW); 11 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MI Program; Critical Information Policy Studies (Concentration-Plus-Co-op Option)

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
  - Co-op (1.0 FCE) plus the Co-op Independent Modules (0.0 FCE)
  - 2.5 required FCEs:
    - INF1001H *Knowledge and Information in Society*
    - INF2181H *Information Policy, Regulation, and Law*
    - INF2240H *Political Economy and Cultural Studies of Information*
    - INF2242H *Studying Information and Knowledge Practice*
    - INF2243H *Histories of Information Technologies*
  - 4.5 elective FCEs.
- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Information: Information MI; Concentration: Culture and Technology

MI Program; Culture and Technology (Concentration-Only Option)

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
  - 3.0 required FCEs:
    - INF1501H *Introduction to Culture & Technology*
    - INF1511H *Culture & Technology Studio I*
    - INF1512H *Culture & Technology Studio II*
    - either INF2228H *The Future of Things: Digitization and Remediation* or INF2320H *Remix Culture* or INF2331H *The Future of the Book*
    - INF2243H *Histories of Information Technologies*
    - INF2321H *Digital Culture*
  - 5.0 elective FCEs.
- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FW-FW); 11 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MI Program; Culture and Technology (Concentration-Plus-Thesis Option)

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
  - Thesis (2.0 FCEs)
  - 3.0 required FCEs:
    - INF1501H *Introduction to Culture & Technology*
    - INF1511H *Culture & Technology Studio I*
    - INF1512H *Culture & Technology Studio II*
    - either INF2228H *The Future of Things: Digitization and Remediation* or INF2320H *Remix Culture* or INF2331H *The Future of the Book*
    - INF2243H *Histories of Information Technologies*
    - INF2321H *Digital Culture*
  - Research methods course (0.5 FCE)
  - Reading course (0.5 FCE)
  - 2.0 elective FCEs.
- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FW-FW); 11 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MI Program; Culture and Technology Concentration-Plus-Co-op Option

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
  - Co-op (1.0 FCE) plus the Co-op Independent Modules (0.0 FCE)
  - 3.0 required FCEs:
    - INF1501H *Introduction to Culture & Technology*
    - INF1511H *Culture & Technology Studio I*
    - INF1512H *Culture & Technology Studio II*
    - either INF2228H *The Future of Things: Digitization and Remediation* or INF2320H *Remix Culture* or INF2331H *The Future of the Book*

        - INF2243H *Histories of Information Technologies*
        - INF2321H *Digital Culture*
    - 4.0 elective FCEs.
- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Information: Information MI; Concentration: Human Centred Data Science

MI Program; Human Centred Data Science (Concentration-Only Option)

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
    - 2.5 required FCEs:
        - INF1340H *Programming for Data Science*
        - INF1344H *Introduction to Statistics for Data Science*
        - INF2178H *Experimental Design for Data Science*
        - INF2190H *Data Analytics: Introduction, Methods and Practical Approaches*
        - INF2210H *Human Values in Data Science*
    - 5.5 elective FCEs.
- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FW-FW); 11 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MI Program; Human Centred Data Science (Concentration-Plus-Thesis Option)

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
    - Thesis (2.0 FCEs)
    - 2.5 required FCEs:
        - INF1340H *Programming for Data Science*
        - INF1344H *Introduction to Statistics for Data Science*
        - INF2178H *Experimental Design for Data Science*
        - INF2190H *Data Analytics: Introduction, Methods and Practical Approaches*
        - INF2210H *Human Values in Data Science*
    - Research methods course (0.5 FCE)
    - Reading course (0.5 FCE)
    - 2.5 elective FCEs.
- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FW-FW); 11 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MI Program; Human Centred Data Science (Concentration-Plus-Co-op Option)

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
    - Co-op (1.0 FCE) plus the Co-op Independent Modules (0.0 FCE)
    - 2.5 required FCEs:
        - INF1340H *Programming for Data Science*
        - INF1344H *Introduction to Statistics for Data Science*
        - INF2178H *Experimental Design for Data Science*
        - INF2190H *Data Analytics: Introduction, Methods and Practical Approaches*
        - INF2210H *Human Values in Data Science*
    - 4.5 elective FCEs.
- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Information: Information MI; Concentration: Information Systems and Design

MI Program; Information Systems and Design (Concentration-Only Option)

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
  - 2.5 required FCEs:
    - INF1339H *Introduction to Computational Thinking*
    - INF1341H *Systems Analysis and Process Innovation*
    - INF1342H *System Requirements and Architectural Design*
    - INF1343H *Data Modeling and Database Design*
    - INF2177H *Information Management and Systems*
  - 5.5 elective FCEs.
- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FW-FW); 11 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MI Program; Information Systems and Design (Concentration-Plus-Thesis Option)

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
  - Thesis (2.0 FCEs)
  - 2.5 required FCEs:
    - INF1339H *Introduction to Computational Thinking*
    - INF1341H *Systems Analysis and Process Innovation*
    - INF1342H *System Requirements and Architectural Design*
    - INF1343H *Data Modeling and Database Design*
    - INF2177H *Information Management and Systems*.
  - Research methods course (0.5 FCE).
  - Reading course (0.5 FCE).
  - 2.5 elective FCEs.
- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FW-FW); 11 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MI Program; Information Systems and Design (Concentration-Plus-Co-op Option)

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
  - Co-op (1.0 FCE) plus the Co-op Independent Modules (0.0 FCE)
  - 2.5 required FCEs:
    - INF1339H *Introduction to Computational Thinking*
    - INF1341H *Systems Analysis and Process Innovation*
    - INF1342H *System Requirements and Architectural Design*
    - INF1343H *Data Modeling and Database Design*
    - INF2177H *Information Management and Systems*
  - 4.5 elective FCEs.
- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Information: Information MI; Concentration: Knowledge Management and Information Management

Admissions to this concentration have been administratively suspended.

MI Program; Knowledge Management and Information Management (Concentration-Only Option)

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
  - 2.5 required FCEs:
    - INF1003H *Information Systems, Services, and Design*
    - INF1230H *Management of Information Organizations*
    - INF2175H *Managing Organizational Records I*
    - INF2176H *Information Management in Organizations — Models and Platforms*
    - INF2186H *Metadata Schemas and Applications*.
  - 5.5 elective FCEs.
- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FW-FW); 11 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MI Program; Knowledge Management and Information Management (Concentration-Plus-Thesis Option)

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
  - Thesis (2.0 FCEs)
  - 2.5 required FCEs:
    - INF1003H *Information Systems, Services, and Design*
    - INF1230H *Management of Information Organizations*
    - INF2175H *Managing Organizational Records I*
    - INF2176H *Information Management in Organizations — Models and Platforms*
    - INF2186H *Metadata Schemas and Applications*.
  - Research methods course (0.5 FCE)
  - Reading course (0.5 FCE)
  - 2.5 elective FCEs.
- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FW-FW); 11 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MI Program; Knowledge Management and Information Management (Concentration-Plus-Co-op Option)

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
  - Co-op (1.0 FCE) plus the Co-op Independent Modules (0.0 FCE)
  - 2.5 required FCEs:
    - INF1003H *Information Systems, Services, and Design*
    - INF1230H *Management of Information Organizations*
    - INF2175H *Managing Organizational Records I*
    - INF2176H *Information Management in Organizations — Models and Platforms*
    - INF2186H *Metadata Schemas and Applications*.
  - 4.5 elective FCEs.
- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Information: Information MI; Concentration: Library and Information Science

MI Program; Library and Information Science (Concentration-Only Option)

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
  - 2.0 required FCEs:
    - INF1321H *Representing, Documenting, and Accessing the Cultural Record*
    - INF1322H *Communities and Values*
    - INF1323H *The Information Experience*
    - INF1324H *Critical Infrastructures*.
  - 6.0 elective FCEs.

- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FW-FW); 11 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MI Program; Library and Information Science (Concentration-Plus-Thesis Option)

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
  - Thesis (2.0 FCEs)
  - 2.0 required FCEs:
    - INF1321H *Representing, Documenting, and Accessing the Cultural Record*
    - INF1322H *Communities and Values*
    - INF1323H *The Information Experience*
    - INF1324H *Critical Infrastructures*
  - Research methods course (0.5 FCE)
  - Reading course (0.5 FCE)
  - 3.0 elective FCEs.
- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FW-FW); 11 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MI Program; and Information Science (Concentration-Plus-Co-op Option)

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
  - Co-op (1.0 FCE) plus the Co-op Independent Modules (0.0 FCE)
  - 2.0 required FCEs:
    - INF1321H *Representing, Documenting, and Accessing the Cultural Record*
    - INF1322H *Communities and Values*
    - INF1323H *The Information Experience*
    - INF1324H *Critical Infrastructures*
  - 5.0 elective FCEs.
- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Information: Information MI; Concentration: User Experience Design

MI Program; User Experience Design (Concentration-Only Option)

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
  - 2.5 required FCEs:
    - INF1602H *Fundamentals of User Experience*
    - INF2169H *User-Centred Information Systems Development*
    - INF2170H *Information Architecture*
    - INF2191H *User Interface Design*
    - INF2192H *Representing UX*.
  - 5.5 elective FCEs.
- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FW-FW); 11 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MI Program; User Experience Design (Concentration-Plus-Thesis Option)

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
  - Thesis (2.0 FCEs)
  - 2.5 required FCEs:
    - INF1602H *Fundamentals of User Experience*
    - INF2169H *User-Centred Information Systems Development*
    - INF2170H *Information Architecture*
    - INF2191H *User Interface Design*
    - INF2192H *Representing UX*
  - Research methods course (0.5 FCE)

    - Reading course (0.5 FCE)
    - 2.5 elective FCEs.
- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FW-FW); 11 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

User Experience Design (Concentration-Plus-Co-op Option)

Completion Requirements

- Students must successfully complete a total of **8.0 full-course equivalents (FCEs)** as follows:
    - Co-op (1.0 FCE) plus the Co-op Independent Modules (0.0 FCE)
    - 2.5 required FCEs:
        - INF1602H *Fundamentals of User Experience*
        - INF2169H *User-Centred Information Systems Development*
        - INF2170H *Information Architecture*
        - INF2191H *User Interface Design*
        - INF2192H *Representing UX*
    - 4.5 elective FCEs.
- Note: of the total 8.0 FCEs for this option, 0.5 FCE must come from each of the following four Professional Requirements areas: Technical, Managerial, Professional Values, and Critical Perspectives. This requirement can be fulfilled by required and elective courses for each concentration.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Information: Information Studies GDipISt

Admissions to this diploma program have closed. The program will close on August 31, 2025.

The Diploma of Advanced Study in Information Studies is a post-master's diploma. It is designed:

- for information professionals who want to pursue further studies, but do not wish to take a PhD degree
- for practitioners who wish to advance their professional standing, develop a specialization, or redirect their career
- to build on a person’s knowledge, experience, previous education, and special interests
- to be tailored to the individual’s needs and interests.

Diploma of Advanced Study in Information Studies credits cannot be transferred to the PhD program, and there is no thesis option.

The diploma may be taken on a full-time or part-time basis.

Graduate Diploma of Advanced Study in Information Studies

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Information's additional admission requirements stated below.
- Applicants must have a Master of Information or equivalent degree. Visit the Faculty of Information website for details.
- The graduate diploma program will be tailored to the individual's needs and interests with courses selected in consultation with the Graduate Coordinator.
- All incoming graduate students must have a good command of English. Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must show evidence of having taken one of the following tests. Scores must be from tests taken within the last two years.
    - The Test of English as a Foreign Language (TOEFL) with the following minimum scores:
        - Paper-based TOEFL: 600 and 5.5 on the Test of Written English (TWE)
        - Internet-based TOEFL: 107/120, with 24/30 on the speaking section and 27/30 on the writing section.
    - The International English Language Testing System (IELTS): a minimum required score of 7.5 overall with 7.5 on the writing section and 7.0 on the speaking section.
    - Certificate of Proficiency in English (COPE): a minimum required score of 95 overall with 41 on the writing component, 27 on the reading component, and 27 on the listening component.
    - English Language Program, U of T School of Continuing Studies with an overall score of A in Academic English Level 60.

Completion Requirements

- Students must successfully complete a total of **4.0 full-course equivalents (FCEs)** as follows:
    - At least 3.0 FCEs (six half courses) must be chosen from courses offered in the MI degree program.
    - Only 0.5 FCE (one half course) may be a reading course.
    - Up to 1.0 FCE (two half courses) may be taken in other departments.

Mode of Delivery: In person
Program Length: 2 sessions full-time (typical registration sequence: FW); 4 sessions part-time
Time Limit: 2 years full-time; 3 years part-time

Information: Information PhD

The **Doctor of Philosophy (PhD) program** in Information provides opportunities for advanced scholarly inquiry into theoretical aspects of information and in the empirical investigations of information in various contexts.

PhD students come from different backgrounds and with different areas of interest. Therefore, the curriculum both fosters a common conversation about the field of information and supports the development of individual (even idiosyncratic) research projects. The focus of the program is to enable the student to achieve competence in order to carry out the research and writing of an original thesis in information.

Admissions to the flexible-time option have been administratively suspended.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Information's additional admission requirements stated below.
- Average of at least A– in an appropriate master's degree program, or equivalent. Equivalency is normally determined by the number of courses and/or credits taken. Applicants holding an MLS or other master's degree earned in two or three sessions, or by completing 5.0 to 7.5 full-course equivalents (FCEs), will normally be required to take additional courses in the MI program.
- Admission is limited to graduates of high intellectual ability who have an interest in research. Evaluation of applicants is based on academic records, a statement of research interest, and three academic letters of reference. A personal interview may be requested.
- All incoming graduate students must have a good command of English. All applicants educated outside Canada whose primary language is not English must demonstrate proficiency in the English language. This requirement is a condition of admission and must be met before an offer of admission is made. The English language requirement may be satisfied using one of the following tests. Scores must be from tests taken within the last two years.
  - Test of English as a Foreign Language (TOEFL) with the following minimum scores:
    - Paper-based TOEFL exam: 600 with 5.5 on the Test of Written English (TWE)
    - Internet-based TOEFL exam: 107/120 with 24/30 on the speaking section and 27/30 on the writing section.
  - International English Language Testing System (IELTS): a minimum required score of 7.5 overall with 7.5 on the writing section and 7.0 on the speaking section.
  - Certificate of Proficiency in English (COPE): a minimum required score of 95 overall with 41 on the writing component, 27 on the reading component, and 27 on the listening component.
  - English Language Program, U of T School of Continuing Studies with an overall score of A in Academic English Level 60.
- Admission procedures are described in the General Regulations section of this calendar.
- Doctoral students are admitted in September.
- Meeting the minimum requirements of the Faculty of Information and the School of Graduate Studies does not guarantee admission.

Completion Requirements

To achieve candidacy, students must fulfil the following:

- **In all concentrations (except Media, Technology, and Culture)**, students must successfully complete a total of **4.0 full-course equivalents (FCEs)** as follows:
  - INF3001H *Research in Information: Foundations*.
  - A methods course: INF3003H *Research in Information: Frameworks and Design* **or** a specific methods course to be determined in consultation with the student's research advisor.
  - INF3006Y *Major Area Reading Course* **or** two additional electives to be determined in consultation with the research advisor (1.0 FCE).
  - 2.0 elective FCEs.

Upon achievement of candidacy, students must:

- Complete other courses appropriate for the student's research.
- Pass a **qualifying exam**.
- Present and defend a **thesis research proposal**.
- Complete a **thesis** and pass a **Doctoral Final Oral Examination**.
- Be regularly registered in the School of Graduate Studies during each year of the program.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Flexible-Time Option)

Minimum Admission Requirements

Admissions have been administratively suspended.

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Information's additional admission requirements stated below.

- Average of at least A– in an appropriate master's degree program, or equivalent. Equivalency is normally determined by the number of courses and/or credits taken. Applicants holding an MLS or other master's degree earned in two or three sessions, or by completing 5.0 to 7.5 full-course equivalents (FCEs), will normally be required to take additional courses in the MI program.
- Admission is limited to graduates of high intellectual ability who have an interest in research. Evaluation of applicants is based on academic records, a statement of research interest, and three academic letters of reference. A personal interview may be requested.
- All incoming graduate students must have a good command of English. All applicants educated outside Canada whose primary language is not English must demonstrate proficiency in the English language. This requirement is a condition of admission and must be met before an offer of admission is made. The English language requirement may be satisfied using one of the following tests. Scores must be from tests taken within the last two years.
  - Test of English as a Foreign Language (TOEFL) with the following minimum scores:
    - Paper-based TOEFL exam: 600 with 5.5 on the Test of Written English (TWE)
    - Internet-based TOEFL exam: 107/120 with 24/30 on the speaking section and 27/30 on the writing section.
  - International English Language Testing System (IELTS): a minimum required score of 7.5 overall with 7.5 on the writing section and 7.0 on the speaking section.
  - Certificate of Proficiency in English (COPE): a minimum required score of 95 overall with 41 on the writing component, 27 on the reading component, and 27 on the listening component.
  - English Language Program, U of T School of Continuing Studies with an overall score of A in Academic English Level 60.
- Admission procedures are described in the General Regulations section of this calendar.
- Doctoral students are admitted in September.
- Meeting the minimum requirements of the Faculty of Information and the School of Graduate Studies does not guarantee admission.

Completion Requirements

To achieve candidacy, students must fulfil the following:

- Complete **4.0 full-course equivalents (FCEs)** as follows:
  - INF3001H *Research in Information: Foundations*.
  - A methods course: INF3003H *Research in Information: Frameworks and Design* or a specific methods course to be determined in consultation with the student's research advisor.
  - INF3006Y *Major Area Reading Course* **or** two additional electives to be determined in consultation with the research advisor (1.0 FCE).
  - 2.0 elective FCEs.
- Other courses appropriate for the student's research may also be required.
- Pass a **qualifying exam**.
- Present and defend a **thesis research proposal**.
- Complete a **thesis** and pass a **Doctoral Final Oral Examination**.
- Ensure that they have adequate time on campus to attend classes and to fulfil the academic requirements for an advanced research degree. Students must spend at least two full-time sessions on campus.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

Information: Information PhD; Concentration: Media, Technology, and Culture

PhD Program; Concentration: Media, Technology, and Culture

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Information's additional admission requirements stated below.
- Average of at least A– in an appropriate master's degree program, or equivalent. Equivalency is normally determined by the number of courses and/or credits taken. Applicants holding an MLS or other master's degree earned in two or three sessions, or by completing 5.0 to 7.5 full-course equivalents (FCEs), will normally be required to take additional courses in the MI program.
- Admission is limited to graduates of high intellectual ability who have an interest in research. Evaluation of applicants is based on academic records, a statement of research interest, and three academic letters of reference. A personal interview may be requested.
- All incoming graduate students must have a good command of English. All applicants educated outside Canada whose primary language is not English must demonstrate proficiency in the English language. This requirement is a condition of admission and must be met before an offer of admission is made. The English language requirement may be satisfied using one of the following tests. Scores must be from tests taken within the last two years.
  - Test of English as a Foreign Language (TOEFL) with the following minimum scores:
    - Paper-based TOEFL exam: 600 with 5.5 on the Test of Written English (TWE)
    - Internet-based TOEFL exam: 107/120 with 24/30 on the speaking section and 27/30 on the writing section.
  - International English Language Testing System (IELTS): a minimum required score of 7.5 overall with 7.5 on the writing section and 7.0 on the speaking section.

    - Certificate of Proficiency in English (COPE): a minimum required score of 95 overall with 41 on the writing component, 27 on the reading component, and 27 on the listening component.
    - English Language Program, U of T School of Continuing Studies with an overall score of A in Academic English Level 60.
- Admission procedures are described in the General Regulations section of this calendar.
- Doctoral students are admitted in September.
- Meeting the minimum requirements of the Faculty of Information and the School of Graduate Studies does not guarantee admission.

Completion Requirements

To achieve candidacy, students must successfully complete a total of **4.0 full-course equivalents (FCEs)** as follows:

- INF3001H *Research in Information: Foundations*.
- A methods course: INF3012H *Social Scientific Methods for Media* **or** INF3014H *Cultural Interpretive Methods for Media and Technology*. Course selection to be determined in consultation with the student's research advisor.
- INF3009H *Theory and History of Media Technology*.
- INF3010H *Power, Media, and Technology*.
- 2.0 elective FCEs relevant to media, technology, and culture.

Upon achievement of candidacy, students must:

- Complete other courses appropriate for the student's research.
- Pass a **qualifying exam**.
- Present and defend a **thesis research proposal**.
- Complete a **thesis** and pass a **Doctoral Final Oral Examination**.
- Be regularly registered in the School of Graduate Studies during each year of the program.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program; Concentration: Media, Technology, and Culture (Flexible-Time Option)

Minimum Admission Requirements

Admissions have been administratively suspended.

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Information's additional admission requirements stated below.
- Average of at least A– in an appropriate master's degree program, or equivalent. Equivalency is normally determined by the number of courses and/or credits taken. Applicants holding an MLS or other master's degree earned in two or three sessions, or by completing 5.0 to 7.5 full-course equivalents (FCEs), will normally be required to take additional courses in the MI program.
- Admission is limited to graduates of high intellectual ability who have an interest in research. Evaluation of applicants is based on academic records, a statement of research interest, and three academic letters of reference. A personal interview may be requested.
- All incoming graduate students must have a good command of English. All applicants educated outside Canada whose primary language is not English must demonstrate proficiency in the English language. This requirement is a condition of admission and must be met before an offer of admission is made. The English language requirement may be satisfied using one of the following tests. Scores must be from tests taken within the last two years.
    - Test of English as a Foreign Language (TOEFL) with the following minimum scores:
        - Paper-based TOEFL exam: 600 with 5.5 on the Test of Written English (TWE)
        - Internet-based TOEFL exam: 107/120 with 24/30 on the speaking section and 27/30 on the writing section.
    - International English Language Testing System (IELTS): a minimum required score of 7.5 overall with 7.5 on the writing section and 7.0 on the speaking section.
    - Certificate of Proficiency in English (COPE): a minimum required score of 95 overall with 41 on the writing component, 27 on the reading component, and 27 on the listening component.
    - English Language Program, U of T School of Continuing Studies with an overall score of A in Academic English Level 60.
- Admission procedures are described in the General Regulations section of this calendar.
- Doctoral students are admitted in September.
- Meeting the minimum requirements of the Faculty of Information and the School of Graduate Studies does not guarantee admission.

Completion Requirements

To achieve candidacy, students must successfully complete a total of **4.0 full-course equivalents (FCEs)** as follows:

- INF3001H *Research in Information: Foundations*.
- A methods course: INF3012H *Social Scientific Methods for Media* **or** INF3014H *Cultural Interpretive Methods for Media and Technology*. Course selection to be determined in consultation with the student's research advisor.
- INF3009H *Theory and History of Media Technology*.
- INF3010H *Power, Media, and Technology*.
- 2.0 elective FCEs relevant to media, technology, and culture.

Upon achievement of candidacy, students must:

- Complete other courses appropriate for the student's research.
- Pass a **qualifying exam**.
- Present and defend a **thesis research proposal**.
- Complete a **thesis** and pass a **Doctoral Final Oral Examination**.

- Be regularly registered in the School of Graduate Studies during each year of the program.

Mode of Delivery: In person
Program Length: 6 years full-time
Time Limit: 8 years full-time

Information: Museum Studies MMSt

The **Master of Museum Studies (MMSt) program** prepares students for future involvement in museums and related cultural agencies. The program examines the theoretical body of knowledge of museology as a necessary context for professional practice. The Faculty of Information also offers a combined degree program whereby students may complete both a Master of Information and Master of Museum Studies.

MMSt Program (Coursework Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Application deadlines are available on the Master of Museum Studies web page. Applicants must also satisfy the Faculty's additional admission requirements stated below. Meeting the minimum requirements does not guarantee admission.
- An appropriate bachelor's degree with an overall grade of at least a B+ average (grade point average 3.3) from a recognized university.
- Demonstrated previous experience in museums or related cultural organizations will also be considered. Admission to this program is competitive.
- All incoming graduate students must have a good command of English. All applicants educated outside Canada whose primary language is not English must demonstrate proficiency in the English language. This requirement is a condition of admission and must be met before an offer of admission is made. The English language requirement may be satisfied using one of the following tests:
  - Test of English as a Foreign Language (TOEFL) with the following minimum scores:
    - paper-based TOEFL exam: 600 with 5.5 on the Test of Written English (TWE)
    - Internet-based TOEFL exam: 107/120 with 24/30 on the speaking section and 27/30 on the writing section.
  - International English Language Testing System (IELTS): a minimum required score of 7.5 overall with 7.5 on the writing section and 7.0 on the speaking section.
  - Certificate of Proficiency in English (COPE): a minimum required score of 95 overall with 41 on the writing component, 27 on the reading component, and 27 on the listening component.
  - English Language Program, U of T School of Continuing Studies with an overall score of A in Academic English Level 60.

Completion Requirements

- Students must successfully complete a minimum of **7.5 full-course equivalents (FCEs)** including:
  - Five required half courses (2.5 FCEs).
  - MSL4000Y *Exhibition Project*.
  - Eight additional courses (4.0 FCEs), of which 2.0 FCEs must be internal (Museum Studies) elective courses.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FW-FW)
Time Limit: 3 years full-time

MMSt Program (Thesis Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Application deadlines are available on the Master of Museum Studies web page. Applicants must also satisfy the Faculty's additional admission requirements stated below. Meeting the minimum requirements does not guarantee admission.
- An appropriate bachelor's degree with an overall grade of at least a B+ average (grade point average 3.3) from a recognized university.
- Demonstrated previous experience in museums or related cultural organizations will also be considered. Admission to this program is competitive.
- All incoming graduate students must have a good command of English. All applicants educated outside Canada whose primary language is not English must demonstrate proficiency in the English language. This requirement is a condition of admission and must be met before an offer of admission is made. The English language requirement may be satisfied using one of the following tests:
  - Test of English as a Foreign Language (TOEFL) with the following minimum scores:
    - paper-based TOEFL exam: 600 with 5.5 on the Test of Written English (TWE)
    - Internet-based TOEFL exam: 107/120 with 24/30 on the speaking section and 27/30 on the writing section.
  - International English Language Testing System (IELTS): a minimum required score of 7.5 overall with 7.5 on the writing section and 7.0 on the speaking section.
  - Certificate of Proficiency in English (COPE): a minimum required score of 95 overall with 41 on the writing component, 27 on the reading component, and 27 on the listening component.
  - English Language Program, U of T School of Continuing Studies with an overall score of A in Academic English Level 60.

Completion Requirements

- The thesis option allows students to gain experience in developing and executing a research project from beginning to end. Students gain familiarity with the research process and hone their research skills. Faculty approval is required to enter the thesis option. The thesis option is designed for students who have a clearly defined topic, can find a supervisor, and can meet tight deadlines in order to graduate within the usual time frame envisioned for the degree.
- Students must successfully complete a total of **7.5 full-course equivalents (FCEs)** as follows:
  - Five required half courses (2.5 FCEs).
  - A research methods course (0.5 FCE) appropriate to their program of study with a final grade of at least A–.
  - A thesis (2.0 FCEs).
  - Five additional courses (2.5 FCEs), of which up to four graduate half courses (2.0 FCEs) may be taken outside the MMSt program.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FW-FW)
Time Limit: 3 years full-time

Information: Information MI and Information Studies GDipISt Courses

Not all courses are offered every year. Consult the Faculty of Information website for the annual course offerings; course descriptions; and details of prerequisites, corequisites, exclusions, and permissions. Inquiries concerning the selection of courses to be offered in any given session should be directed to the Faculty of Information.

Course Code	Course Title
INF1001H	Knowledge and Information in Society
INF1003H	Information Systems, Services, and Design
INF1005H	Information Workshop I
INF1006H	Information Workshop II
INF1230H	Management of Information Organizations
INF1240H	Research Methods
INF1310H	Introduction to Reference
INF1320H	Knowledge Organization
INF1321H	Representing, Documenting, and Accessing the Cultural Record
INF1322H	Communities and Values
INF1323H	The Information Experience
INF1324H	Critical Infrastructures
INF1325H	Online Information Retrieval
INF1330H	Archives Concepts and Issues
INF1331H	Archival Arrangement and Description
INF1339H	Introduction to Computational Thinking
INF1340H	Programming for Data Science
INF1341H	Systems Analysis and Process Innovation
INF1342H	System Requirements and Architectural Design
INF1343H	Data Modeling and Database Design
INF1344H	Introduction to Statistics for Data Science
INF1501H	Introduction to Culture & Technology
INF1502H	Culture & Technology II
INF1511H	Culture & Technology Studio I
INF1512H	Culture & Technology Studio II
INF1602H	Fundamentals of User Experience
INF2010H	Reading Course
INF2011H	Reading Course
INF2040H	Project Management
INF2102H	Geographic Information Systems (GIS) in Libraries
INF2103H	Recordkeeping Cultures
INF2104H	Archives and Community
INF2108H	Digital Archives for Minoritized Material: Ethics and Praxis
INF2110H	Design and Evaluation of Information Literacy Programs
INF2115H	Data Librarianship
INF2120H	Conservation and Preservation of Recorded Information
INF2121H	Specialized Archives
INF2122H	Digital Preservation and Curation
INF2123H	Black Studies and the Archive
INF2124H	Surveillance and Identity
INF2127H	Collection Development, Evaluation, and Management
INF2129H	Graphic Novels and Comic Books in the Library
INF2132H	Ancient Books and Records in Special Collections
INF2133H	Legal Literature and Librarianship
INF2134H	Business Information Resources
INF2135H	Evidence-Based Healthcare for Librarians

Course Code	Course Title
INF2136H	Government Information and Publications
INF2141H	Children's Cultural Texts and Artifacts
INF2143H	Issues in Children's and Young Adults' Services
INF2144H	Coded Cultures
INF2145H	Creation and Organization of Bibliographic Records
INF2146H	Trusting Records
INF2149H	Administrative Decision-Making in Information Organizations
INF2150H	Legal Issues in Archives
INF2151H	Indigenous Data Governance Foundations
INF2154H	Current Issues in Intellectual Freedom: Library, Society, and the Right to Information
INF2155H	The Public Library in the Community: Developing a Critical Practice
INF2159H	Print and Digital Bibliography
INF2160H	Global Manuscript Traditions
INF2161H	History of Books and Publishing
INF2162H	Rare Books and Manuscripts
INF2163H	Data Analysis of Social Networks
INF2164H	UX Research and Design for Video Games
INF2165H	Accessibility and Inclusive Design
INF2166H	Business Process Management and Mining
INF2167H	R for Data Science
INF2169H	User-Centred Information Systems Development
INF2170H	Information Architecture
INF2171H	Usability Assessment: Concepts, Methods, and Tools
INF2172H	Readers' Advisory: Reference Work and Resources
INF2173H	Information Professional Practicum I
INF2174H	Histories of Records and Archives
INF2175H	Managing Organizational Records I
INF2176H	Information Management in Organizations — Models and Platforms
INF2177H	Information Management and Systems
INF2178H	Experimental Design for Data Science
INF2179H	Machine Learning with Applications in Python

Course Code	Course Title
INF2180H	Archives: Access, Advocacy, and Outreach
INF2181H	Information Policy, Regulation, and Law
INF2182H	Information Visualization
INF2183H	Knowledge Management and Systems
INF2184H	Appraisal for Records Retention and Archives Acquisition
INF2185H	Libraries, Archives, Museums: Intersections and Tensions
INF2186H	Metadata Schemas and Applications
INF2187H	Personal Recordkeeping and Private Papers
INF2190H	Data Analytics: Introduction, Methods and Practical Approaches
INF2191H	User Interface Design
INF2192H	Representing UX
INF2194Y	Information Systems Design Project
INF2195H to INF2198H	Special Topics in Information
INF2200H	UX Leadership and Influence
INF2201H	Information and Communication Technologies, Design, and Marginality
INF2202H	Data Governance in a World of Big Data
INF2203H	Storytelling with Data
INF2204H	Digital Connectivity for Information Systems: Foundation, Innovation, and Challenges
INF2205H	Designing Sustainable and Resilient Machine Learning Systems with MLOps
INF2206H	Adopting DevOps for Large-Scale Information Systems
INF2207H	Practical Elements of Responsible AI Development
INF2208H	User-Centered Systems for Communication
INF2209H	Human-Centred Topic Models
INF2210H	Human Values in Data Science
INF2211H	Systems Thinking and Design
INF2221H	Digital Divides and Information Professionals: Developing a Critical Practice
INF2223H	Challenges and Opportunities of Open Data
INF2224H	Service Design
INF2225H	Digital Discourse
INF2226H	Queer GLAM

Course Code	Course Title
INF2227H	Asset-Based and Community-Led Development (ABCD) for the GLAM Sector
INF2228H	The Future of Things: Digitization and Remediation
INF2229H	Processing Digital Archives
INF2230H	Just Sustainability Design
INF2232H	Knowledge Equity in Information Organizations
INF2233H	Metadata Mapping in Data Governance
INF2234H	Academic Librarianship
INF2235H	Outer Space and the City
INF2238H	Activism, Media, and Information
INF2239H	Information, Misinformation, and Health
INF2240H	Political Economy and Cultural Studies of Information
INF2241H	Critical Making: Information Studies, Social Values, and Physical Computing
INF2242H	Studying Information and Knowledge Practice
INF2243H	Histories of Information Technologies
INF2245H	Platforms: Global Histories, Practices, and Theories
INF2246H	Leadership in Academic Libraries
INF2250H	Copyright for Information Professionals
INF2255H	Critical Game Studies
INF2256H	Digital Scholarship
INF2260H	Speculative Design
INF2273H	Information Professional Practicum II
INF2300H to INF2310H	Special Topics in Information
INF2311H	Managing Audiovisual Materials
INF2312H	Art Librarianship: Theory Informs Practice
INF2314H	Program Evaluation
INF2315H	Digital Labour
INF2316H	Critical Studies of Social Media
INF2317H	Privacy Studies
INF2318H	Platform Politics and Power
INF2319H	Critical Approaches to Multiculturalism, Information, and Social Integration
INF2320H	Remix Culture
INF2321H	Digital Culture
INF2322H	Film Preservation
INF2325H	Launching Information Ventures
INF2330H	Information Ethnography
INF2331H	The Future of the Book
INF2332H	Information Behaviour
INF2335H	Liaison Librarianship in Academic Libraries
INF2400H to INF2403H	Special Topics in Information
INF2405H to INF2410H	Special Topics in Information
INF3105H	Black Custody
INF3900H	The Emerging Professional
INF3902H	Co-operative Workplace Placement I
INF3903H	Co-operative Workplace Placement II
JDM3619H	Digital Media Distribution
JIE1001H	Seminar in Identity, Privacy, and Security

Information: Information PhD Courses

Course Code	Course Title
INF3001H	Research Colloquium
INF3003H	Research in Information: Frameworks and Design
INF3006Y	Major Area Reading Course
INF3009H	Theory and History of Media Technology
INF3010H	Power, Media, and Technology
INF3012H	Social Scientific Methods for Media
INF3014H	Cultural Interpretive Methods for Media and Technology
INF3015H	Reading Course
INF3018H	Professorial Pedagogy
INF3100H	Special Topics in Information
INF3101H	Special Topics in Information
INF3102H	Ethics of Artificial Intelligence
INF3103H	Methods for Algorithmic FATE (Fairness, Accountability, Transparency, Ethics) Research
INF3104H	Data Science Foundations

Information: Museum Studies MMSt Courses

Not all courses are offered every year. Please consult the Faculty of Information website for course availability. The minimum requirement for the MMSt degree is **7.5 full-course equivalents (FCEs)**.

MMSt Required Courses (3.5 FCEs)

Course Code	Course Title
MSL1150H	Collection Management
MSL1230H	Ethics, Leadership, Management
MSL2331H	The Museum Exhibition: Histories, Practices, Genres
MSL2370H	Museums and Cultural Heritage: Context and Critical Issues
either MSL2350H *or* INF2040H	Museum Planning and Management: Projects and Fundraising *or* Project Management
either MSL4000Y *or* Thesis option	Exhibition Project

MMSt Elective Courses

Internal (Museum Studies) Elective Courses

Course Code	Course Title
MSL1300H	Contemporary Theories of Art and Culture
MSL1350H	Museums and their Publics
MSL2000H	Curatorial Practice
MSL2050H	Curating Science
MSL2100H	Museum Environment
MSL2115H	Global Cultures and Museums
MSL2230H	Nature and Culture: Histories of Heritage Interpretation in North America
MSL2235H	Equity, Diversity, and Inclusion in the GLAM Sector
MSL2240H	The Photographic Record
MSL2255H	Social Digital Memory
MSL2301H to MSL2310H	Special Topics in Museum Studies
MSL2325H	Museums and New Media Practice
MSL2326H	Artifact, Audience, Text: Writing in the Museum
MSL2330H	Interpretation and Meaning Making in Museums
MSL2332H	Public Programs and Education
MSL2335H	The Digital Museum: From Strategy to Implementation
MSL2340H	Issues in Cultural Policy and Contemporary Culture
MSL2352H	Foundations of Visitor Research
MSL2360H	Museums and Indigenous Communities: Changing Relationships, Changing Practice
MSL3000H	Internship
MSL3900H	The Emerging Museum Professional
MSL5050H	Special Studies

External Elective Courses

Courses relevant to the Museum Studies program and student interests are available on the program web page.

Italian Studies

Italian Studies: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Italian Studies

MA

- Field:
  - Italian Literature

PhD

- Fields:
  - Middle Ages and Renaissance;
  - Seventeenth and Eighteenth Centuries;
  - Nineteenth and Twentieth Centuries

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Book History and Print Culture**
  - Italian Studies, MA, PhD
- **Editing Ancient and Medieval Texts**
  - Italian Studies, PhD
- **Sexual Diversity Studies**
  - Italian Studies, MA, PhD

Overview

Graduate students in the Department of Italian Studies come from several parts of the world, including Canada, the United States, and Europe. Faculty members are heavily engaged in teaching and research in their fields. Some of them are associated at the graduate level with the Centre for Comparative Literature, the Centre for Medieval Studies, the McLuhan program, Cinema Studies, and the Centre for Drama, Theatre and Performance Studies.

Contact and Address

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Department of Italian Studies
University of Toronto
Carr Hall, 2nd floor, room 210
100 St. Joseph Street
Toronto, Ontario M5S 1J4 Canada

Italian Studies: Graduate Faculty

Full Members

Brilli, Elisa - MA, PhD
Piccardo, Enrica - MA, PhD
Pierno, Franco - BA, MA, PhD ***(Associate Chair, Graduate)***
Robins, William - BA, MPH, PhD
Somigli, Luca - PhD ***(Chair and Graduate Chair)***
Terpstra, Nicholas - BA, MA, PhD
Zambenedetti, Alberto - MA, PhD

Members Emeriti

Bancheri, Salvatore - BA, MA, PhD
Eisenbichler, Konrad - BA, MA, PhD
Guardiani, Francesco - MA, PhD
Lettieri, Michael - BA, MA, PhD
Pietropaolo, Domenico - BSc, MA, PhD
Rupp, Stephen - BA, MA, MA, MPH, PhD

Associate Members

Gaimari, Giulia - PhD
Ingallinella, Laura - BA, MA, MA, PhD
Maneri, Marcello - BA, PhD
Morra, Eloisa - BA, MA, PhD
Pesarini, Angelica - BA, MSc, MA, PhD

Italian Studies: Italian Studies MA

The MA program offers advanced education in Italian literature and provides training in research techniques.

MA: Coursework Only

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Italian Studies' additional admission requirements stated below.
- Successful completion of 7.0 undergraduate full-course equivalents (FCEs) in Italian, including the following: 3.0 FCEs in Italian literature (students must have at least 0.5 FCE in each of three out of four different periods: medieval, Renaissance, seventeenth to eighteenth centuries, nineteenth to twenty-first centuries) and an appropriate upper-year 1.0 FCE in language.

- Minimum B+ standing in their University of Toronto 300- and 400-series courses (or in equivalent courses).
- Two letters of recommendation, preferably from instructors most familiar with the applicant's work.
- A personal statement of intent.
- The department will determine whether applicants need to complete prerequisite work in order to qualify for admission. Applicants will be advised accordingly.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **4.0 full-course equivalents (FCEs)** as follows:
  - ITA1000H *Methodologies for the Teaching and Study of Italian*
  - 3.5 graduate FCEs including a mandatory extra-departmental course (0.5 FCE) and up to two other extra-departmental courses (1.0 FCE) chosen in consultation with the Graduate Coordinator.
- A student's program of study must be approved by the department.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 15 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MA: Coursework Plus Thesis

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Italian Studies' additional admission requirements stated below.
- Successful completion of 7.0 undergraduate full-course equivalents (FCEs) in Italian, including the following: 3.0 FCEs in Italian literature (students must have at least 0.5 FCE in each of three out of four different periods: medieval, Renaissance, seventeenth to eighteenth centuries, nineteenth to twenty-first centuries) and an appropriate upper-year 1.0 FCE in language.
- Minimum B+ standing in their University of Toronto 300- and 400-series courses (or in equivalent courses).
- Two letters of recommendation, preferably from instructors most familiar with the applicant's work.
- A personal statement of intent.
- The department will determine whether applicants need to complete prerequisite work in order to qualify for admission. Applicants will be advised accordingly.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **3.0 full-course equivalents (FCEs)** as follows:
  - ITA1000H *Methodologies for the Teaching and Study of Italian*
  - 2.5 graduate FCEs including a mandatory extra-departmental course (0.5 FCE) and up to two other extra-departmental courses (1.0 FCE) chosen in consultation with the Graduate Coordinator.
- **MA thesis**, subject to approval by the MA thesis supervisor.
- A student's program of study must be approved by the department.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 15 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Italian Studies: Italian Studies PhD

The PhD program prepares students for a career in teaching and scholarship. Graduates are expected to have acquired autonomy in conducting research and preparing scholarly publications. They are trained to teach undergraduate courses in all areas of Italian studies and to design and teach graduate courses in their fields of specialization.

The program is designed to provide a broad knowledge of the discipline, specialized knowledge of a single field, and training in all aspects of scholarly research in the discipline.

Applicants may enter the PhD program via one of two routes: (1) following completion of an appropriate MA degree or (2) direct entry after completing a bachelor's degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Italian Studies' additional admission requirements stated below.
- Successful completion of the University of Toronto MA or its equivalent with an overall average of at least A– in courses. Please note that an A– average does not guarantee admission to the program.
- Two letters of recommendation, preferably from instructors most familiar with the applicant's work.
- A personal statement of intent.
- A statement of research and proposed plan of study.
- A writing sample.
- A curriculum vitae (CV) in English.
- Notes:
  - Applicants with an Italian *laurea magistrale/specialistica* may apply for admission to the PhD program.
  - Applicants with a degree equivalent to a PhD (for example, an Italian *dottorato di ricerca*, a PhD, a *diploma di perfezionamento*, etc.) cannot be accepted to the PhD program.

Completion Requirements

- **Coursework.** Students normally complete a total of **4.0 full-course equivalents (FCEs)** as follows:
  - 3.5 graduate FCEs including a mandatory extra-departmental course (0.5 FCE) and up to two other extra-departmental courses (1.0 FCE) chosen in consultation with the Graduate Coordinator.
  - ITA1000H *Methodologies for the Teaching and Study of Italian*
- **Language requirements.** Students must show evidence of written and oral command of Italian; and, not later than the beginning of Year 3 of PhD registration, must have demonstrated a reading knowledge of Latin and one other language approved by the department.
- **Program progress.** All students must maintain a minimum A– average in order to remain in the program.
- Upon completion of all course requirements, and not later than Year 2 of the PhD program, students will complete the series of written and oral **qualifying examinations**.
- **Thesis** and a **Doctoral Final Oral Examination** on the thesis. Permission to write the thesis in Italian (subject to final approval by the School of Graduate Studies) may be granted to students who first pass a supervised essay-type English examination to demonstrate proficiency in writing correct and idiomatic English prose.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

Completion Requirements

- **Coursework.** Students normally complete a total of **8.0 full-course equivalents (FCEs)** as follows:
  - 7.5 graduate FCEs, including a mandatory extra-departmental course (0.5 FCE) and up to two other extra-departmental courses (1.0 FCE) chosen in consultation with the Graduate Coordinator.
  - ITA1000H *Methodologies for the Teaching and Study of Italian*
- **Language requirements.** Students must show evidence of written and oral command of Italian; and, not later than the beginning of Year 3 of PhD registration, must have demonstrated a reading knowledge of Latin and one other language approved by the department.
- **Program progress.** All students must maintain a minimum A– average in order to remain in the program.
- Upon completion of all course requirements, and not later than Year 2 of the PhD program, students will complete the series of written and oral **qualifying examinations**.
- **Thesis** and a **Doctoral Final Oral Examination** on the thesis. Permission to write the thesis in Italian (subject to final approval by the School of Graduate Studies) may be granted to students who first pass a supervised essay-type English examination to demonstrate proficiency in writing correct and idiomatic English prose.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Italian Studies' additional admission requirements stated below.
- Exceptional students may be admitted directly to the PhD program from the BA with a minimum A– average. Such applicants will apply to the MA program, but indicate in a separate letter to the Graduate Coordinator that they wish to be considered for direct admission to the PhD program.
- Two letters of recommendation, preferably from instructors most familiar with the applicant's work.
- A personal statement of intent.
- A statement of research and proposed plan of study.
- A writing sample.
- A curriculum vitae (CV) in English.
- Notes:
  - Applicants with an Italian *laurea magistrale/specialistica* may apply for admission to the PhD program.
  - Applicants with a degree equivalent to a PhD (for example, an Italian *dottorato di ricerca*, a PhD, a *diploma di perfezionamento*, etc.) cannot be accepted to the PhD program.

Italian Studies: Italian Studies MA, PhD Courses

Not all courses are offered every year. Please consult the department regarding course availability.

Course Code	Course Title
ITA1000H	Methodologies for the Teaching and Study of Italian
ITA1029H	History of Italian Religious Language
ITA1030H	Italian Lexicography: History and Methodologies
ITA1031H	History of Italian Language in North America
ITA1165H	Introduction to Italian Philology
ITA1177H	The Italian Questione della Lingua
ITA1200H	Dante
ITA1202H	Dante as a Reader of Augustine's City of God: Augustinian Textual Communities at the Beginning of the 14th Century
ITA1203H	Boccaccio
ITA1235H	Topics in Italian Studies

Course Code	Course Title
ITA1330H	Petrarch and Petrarchism
ITA1520H	Renaissance Humanism
ITA1535H	Topics in Italian Literature
ITA1540H	Renaissance Italian Theatre
ITA1553H	Renaissance Crossroads: Tales of Exchange in Pre-modern Italy
ITA1555H	Literature and Society in Renaissance Italy
ITA1597H	The Commedia dell'Arte
ITA1601H	Vico
ITA1605H	Theories of the Stage and Dramatic Criticism
ITA1610H	Seventeenth and Eighteenth-Century Theatre
ITA1705H	Pirandello
ITA1710H	Aspects of Modern Italian Poetry
ITA1735H	Topics in Italian Studies I
ITA1736H	Topics in Italian Studies II
ITA1737H	Topics in Italian Studies
ITA1755H	Italian Modernism
ITA1760H	Futurism
ITA1810H	Studies in Italian Literature and Film
ITA1815H	Issues in Italian Film Historiography
ITA1820H	The Mediterranean Noir: A Transnational Approach
ITA1830H	Editing 900: Leonardo Sciascia, his World, his Archive

Kinesiology

Kinesiology: Introduction

Faculty Affiliation

Kinesiology and Physical Education

Degree Programs

Kinesiology

MA, MSc, and PhD

Professional Kinesiology

MPK (admissions have been administratively suspended)

- Concentrations:
  - Adapted Physical Activity
  - Exercise as Medicine
  - Health and Wellness
  - High Performance Strength and Conditioning

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Cardiovascular Sciences**
  - Kinesiology, MA, MSc, PhD
- **Health Services and Policy Research** (admissions have been administratively suspended)
  - Kinesiology, MA, MSc, PhD
- **Musculoskeletal Sciences**
  - Kinesiology, MA, MSc, PhD
- **Public Health Policy** (admissions have been administratively suspended)
  - Kinesiology, MA, MSc, PhD
- **Sexual Diversity Studies**
  - Kinesiology, MA, MSc, PhD
- **Women and Gender Studies**
  - Kinesiology, MA, MSc, PhD
- **Women's Health**
  - Kinesiology, MA, MSc, PhD

Overview

The field of Kinesiology is interdisciplinary. All degree programs are for students interested in research, academic, and professional careers relating to:

- Applied/exercise/environmental physiology
- Biomechanics and ergonomics
- Health-care provision as a kinesiologist
- Metabolic and endocrinological aspects of physical activity
- Motor control and motor learning
- Muscle physiology
- Physical cultural aspects of sport and physical activity
- Physical fitness and athletic strength and conditioning
- Psychological aspects of sport and physical activity
- Psychophysiological aspects of exercise and stress
- Women's health and physical activity.

Contact and Address

Web: kpe.utoronto.ca
Email: grad.kpe@utoronto.ca
Telephone: (416) 946-3645
Fax: (416) 971-2118

Graduate Department of Kinesiology
Faculty of Kinesiology and Physical Education
University of Toronto
55 Harbord Street
Toronto, Ontario M5S 2W6 Canada

Kinesiology: Graduate Faculty

Full Members

Arbour, Kelly - BSc, MSc, PhD
Atkinson, Michael - BA, MA, PhD
Baker, Joseph - PhD
Bentley, Robert Francis - DPhil
Burkhart, Timothy - DrEng
Chen, Joyce - BSc(PT), BPHE, PhD, ScD
Darnell, Simon - BA, MA, PhD
Fusco, Caroline - BA, MSc, PhD
Gillen, Jenna - BPHE, PhD
Hutchison, Michael - BPHE, MSc, PhD
Jacobs, Ira - MHK, MSD, DipPE
Joseph, Janelle - BSc, MSc
Kerr, Gretchen - BPHE, MA, PhD ***(Dean)***
Kirkham, Amy - DSc
Locke, Marius - BA, BSc, PhD
Mainwaring, Lynda - BA, BHK, MHK, PhD, CPsych
McGuire-Adams, Tricia - MA, PhD
Moore, Daniel - BASc, PhD
Sabiston, Catherine - BS, MA, PhD
Santa Mina, Daniel - BSc, MSc, PhD
Tamminen, Katherine - BA, MA, PhD ***(Associate Dean, Graduate Education)***
Tremblay, Luc - BSc, MSc, PhD
Trinh, Linda - AB, MA, PhD
Welsh, Timothy - BPHE, MSc, PhD ***(Associate Dean, Research)***

Members Emeriti

Donnelly, Peter - BA, MS, PhD

Goodman, Jack - BPHE, MSc, PhD
Kidd, Bruce - BA, AM, MA, PhD, OC
MacNeill, Margaret - BPHE, MA, PhD
Thomas, Scott - BSc, MSc, PhD

Associate Members

AL Sinani, Yousra - BPHE, MEd, PhD
Amara, Catherine - BSc, MSc, PhD
Bernstein, Lori - BA, MA, MPH, PhD
Bremer, Emily - BHSc(PT), MHSc
Bundon, Andrea - BSc, MPE
Catapano, Michael - MD
Cavallerio, Francesca - BSc, MSc, MSc
Edmonds, Shaun - BA, MA, PhD
Fraser-Thomas, Jessica - BA, BPHE, BEd, MPH
Frost, David - BA, BPHE, BScEE, MSc, DPhil
Hayhurst, Lyndsay - BA, MA, PhD
Howarth, Samuel
Jarvie, Grant - PhD
Karlinsky, April Davis - BHK
Lawrence, Danielle Michelle - BASc
Lawrence, David Wyndham - MPH, MD
Mack, Diane - BA, MA, PhD
Mazzucco, Marcus - BPHE, JD
Mittal, Nimish - MD
Mutha, Pratik K. - BE, MS
Neyedli, Heather Fern
Oh, Paul - MSc, MD
Orr, Madeleine - BS, MS, MS, DPhil
Peers, Danielle - BPHRE, MPE
Pila, Eva - BS, MHSc
Richards, Doug - MD
Stirling, Ashley - BPHE, MS, PhD ***(Vice-Dean, Programs)***
Taha, Timur - BA, MEd, PhD
Teetzel, Sarah - BS, MA, DPhil
Trimbur, Lucia - PhD
Wattie, Nick - BPHRE, BSc, AM
West, Daniel - BSc
Wilson, Brian - BPHE, MA, PhD

Kinesiology: Kinesiology MA

The purpose of the **Master of Arts (MA) program** is to provide advanced-level education and research training in social sciences and humanities within the field of kinesiology. The MA program is intended to broaden students' understanding of the various aspects of kinesiology from a social sciences and/or humanities disciplinary perspective, as well as to provide them with the necessary scholarly and technical research skills so that they may pursue a high-quality research project. Applicants interested in the MSc in Kinesiology should refer to the MSc program section.

The MA program can be taken on a full-time or part-time basis.

MA Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Kinesiology's additional admission requirements stated below.
- An appropriate bachelor's degree, or its equivalent, from the University of Toronto or from another recognized university.
- A background in kinesiology or a discipline compatible with the research interests and interdisciplinary nature of the Faculty of Kinesiology and Physical Education is preferred.
- An academic standing equivalent to a University of Toronto B+ (76% to 79%) in the last five full-course equivalents of relevant, senior-level courses.
- Proficiency in the English language must be demonstrated by all applicants educated outside Canada whose primary language is not English and who graduate from a university where the language of instruction and examination was not English. The Faculty prefers the Test of English as a Foreign Language (TOEFL) with the following minimum scores:
  - paper-based test: 600 with 5 on the Test of Written English (TWE) and 50 on the Test of Spoken English (TSE)
  - Internet-based test: 100/120 overall and 22/30 on the writing and speaking sections.

Completion Requirements

- **Coursework.** Successful completion of **2.5 full-course equivalents (FCEs)** as follows. All courses must be approved in advance by the student's supervisor and the Graduate Department of Kinesiology.
  - 1.0 FCE in Kinesiology category A courses:
    - KIN1150H *Safeguarding Youth in Sport*
    - KIN5507H *Power, Pleasure/s and the Body: Issues for Physical Cultural Studies*
    - KIN5518H *Physical Cultural Studies and Social Theory*
    - KIN5534H *Sport, Politics, and Social Development*
    - KIN5537H *Health, Media, and Social Change*
    - KIN5544H *Decolonizing Sport Studies*
    - KIN7001H *Directed Reading in Kinesiology*
    - KIN7002H *Directed Research Project in Kinesiology*
    - KIN8233H *Sport Ecology*
  - 0.5 FCE in Methods or Methodology:
    - KIN5510H *Qualitative Inquiry and Physical Cultural Studies*
    - KIN5515H *Quantitative Research Methods in Kinesiology*
    - KIN5536H *Qualitative Inquiry in Sport and Physical Activity*
    - KIN5540H *Narrative Methods in Health Research*
  - 1.0 FCE in other courses.
- SRM3335H *Master's Seminar Series — Compulsory Attendance*, a graduate seminar in Kinesiology.
- A **thesis** proposal written under the supervision of a thesis committee and its oral defence before an examination committee.
- A **thesis** written under the supervision of a thesis committee and its oral defence before an examination committee.
- The student's annual program plan must be approved by the supervisor.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 12 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Kinesiology: Kinesiology MSc

The **Master of Science (MSc) program** is intended to broaden students' understanding of the various interdisciplinary aspects of kinesiology as well as to provide them with the necessary scholarly and technical research skills so that they may pursue a high-quality research project.

The MSc program can be taken on a full-time or part-time basis.

MSc Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Kinesiology's additional admission requirements stated below.
- An appropriate bachelor's degree, or its equivalent, from the University of Toronto or from another recognized university.
- A background in kinesiology or a discipline compatible with the research interests and interdisciplinary nature of the Faculty of Kinesiology and Physical Education is preferred.
- An academic standing equivalent to a University of Toronto B+ (76% to 79%) in the last five full-course equivalents of relevant, senior-level courses.
- Proficiency in the English language must be demonstrated by all applicants educated outside Canada whose primary language is not English and who graduate from a university where the language of instruction and examination was not English. The Faculty prefers the Test of English as a Foreign Language (TOEFL) with the following minimum scores:
  - paper-based test: 600 with 5 on the Test of Written English (TWE) and 50 on the Test of Spoken English (TSE)
  - Internet-based test: 100/120 overall and 22/30 on the writing and speaking sections.

Completion Requirements

- **Coursework.** Successful completion of **2.0 full-course equivalents (FCEs)** as follows. All courses must be approved in advance by the student's supervisor and the Graduate Department of Kinesiology.
  - 0.5 FCE in Kinesiology Category C course:
    - KIN1150H *Safeguarding Youth in Sport*
    - KIN1152H *Psychological Issues in Sport-Related Concussion*
    - KIN5503H *Adaptations to Habitual Activity*
    - KIN5505H *Neuromotor Behaviour*
    - KIN5509H *Applied Muscle Physiology and Biochemistry*
    - KIN5513H *Current Issues in Exercise Psychology*
    - KIN5514H *Human Sensory and Motor Neurophysiology*
    - KIN5525H *Quantitative Motion Analysis*
    - KIN5531H *Skeletal Muscle Plasticity*
    - KIN5533H *Sport Psychology*
    - KIN5534H *Sport, Politics, and Social Development*
    - KIN5535H *Neurorehabilitation and Exercise*
    - KIN5538H *Special Topics in Exercise Oncology*
    - KIN5539H *Advanced Disordered Movement and Neurorehabilitation*
    - KIN5541H *Advanced Exercise Metabolism*
    - KIN5542H *Special Topics in Sport-Related Concussion*
    - KIN5543H *Lifestyle Toxicity and Chronic Disease*
    - KIN5545H *Developing and Reviewing Research Protocols*
    - KIN5546H *Oxygen Delivery and Exercise Performance*
    - KIN5547H *Instrumentation and Signal Processing*
    - KIN7001H *Directed Reading in Kinesiology*
    - KIN7002H *Directed Research Project in Kinesiology*
    - KIN8240H *Emerging Issues in Sport Analytics and Data Modelling*
  - 0.5 FCE Statistics or Methodology course
  - 1.0 FCE from either Kinesiology or another department.
- SRM3335H *Master's Seminar Series — Compulsory Attendance*, a graduate seminar in Kinesiology.
- A **thesis** proposal written under the supervision of a thesis committee and its oral defence before an examination committee.
- A **thesis** written under the supervision of a thesis committee and its oral defence before an examination committee.
- The student's annual program plan must be approved by the supervisor.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 12 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Kinesiology: Kinesiology PhD

Doctoral students are encouraged to develop a program of study that will enhance their basic understanding of critical areas of study within kinesiology and have a direct impact on their research program. Students are also expected to further develop their scholarly and technical research skills so that they may pursue a high-quality research project.

Applicants may enter the **Doctor of Philosophy (PhD) program** via one of two routes: 1) following completion of an MSc degree; or 2) direct entry following completion of a BA, BSc, or BKin degree.

The PhD program can be taken on a full-time or flexible-time basis.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Kinesiology's additional admission requirements stated below.
- A master's degree from the University of Toronto or a recognized university. Formal graduate training in kinesiology is preferred.
- Successful defence of a master's thesis at a recognized university.
- An academic standing equivalent to a University of Toronto A– (80% to 84%) in the master's degree completed.
- A potential supervisor identified from the Faculty of Kinesiology and Physical Education. A supervisor is not required at the time of application, but applicants are encouraged to begin their search early. See the full list of faculty members. Only applicants who have a supervisor will be admitted to the program.
- Proficiency in the English language must be demonstrated by all applicants educated outside Canada whose primary language is not English and who graduated from a university where the language of instruction and examination was not English. The Faculty prefers the Test of English as a Foreign Language (TOEFL) with the following minimum scores:
  - paper-based test: 600 with 5 on the Test of Written English (TWE) and 50 on the Test of Spoken English (TSE)
  - Internet-based test: 100/120 overall and 22/30 on the writing and speaking sections.

Completion Requirements

- Full-time registration (Fall, Spring, Summer sessions) throughout the entire doctoral program.
- **Coursework.** Students must successfully complete a total of **1.5 full-course equivalents (FCEs)** as follows:
  - 1.0 FCE from either Kinesiology or another department
  - 0.5 FCE Statistics or Methodology course
  - SRD4445H *Doctoral Seminar Series — Compulsory Attendance*, a graduate **seminar** in Kinesiology.
  - All courses must be approved in advance by the student's supervisor.
  - The student's annual program plan must be approved by the supervisor.
  - Successful completion of a **comprehensive examination**.
  - Writing of a **thesis** under the supervision of a thesis committee (supervisor plus at least three additional faculty members) and its **defence** before an examination committee appointed by the Graduate Department of Kinesiology.
  - **Oral defence** of the thesis before an examination committee approved by the School of Graduate Studies.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Kinesiology's additional admission requirements stated below.
- An appropriate Bachelor of Kinesiology degree or its equivalent from the University of Toronto or from another recognized university.
- A background in kinesiology or a discipline compatible with the research interests and interdisciplinary nature of the Faculty of Kinesiology and Physical Education is preferred.
- An academic standing equivalent to a University of Toronto A– (80% to 84%) in the last five full-course equivalents of relevant, senior-level courses.
- A potential supervisor identified from the Faculty of Kinesiology and Physical Education. A supervisor is not required at the time of application, but applicants are encouraged to begin their search early. See the full list of faculty members. Only applicants who have a supervisor will be admitted to the program.
- Proficiency in the English language must be demonstrated by all applicants educated outside Canada whose primary language is not English and who graduated from a university where the language of instruction and examination was not English. The Faculty prefers the Test of English as a Foreign Language (TOEFL) with the following minimum scores:
  - paper-based test: 600 with 5 on the Test of Written English (TWE) and 50 on the Test of Spoken English (TSE)
  - Internet-based test: 100/120 overall and 22/30 on the writing and speaking sections.

Completion Requirements

- Full-time registration (Fall, Spring, Summer sessions) throughout the entire doctoral program.

- **Coursework.** Students must successfully complete a total of **2.5 full-course equivalents (FCEs)** as follows. All courses must be approved in advance by the student's supervisor.
  - 2.0 FCEs from either Kinesiology or another department
  - 0.5 FCE Statistics or Methodology course
- SRD4445H *Doctoral Seminar Series — Compulsory Attendance*, a graduate **seminar** in Kinesiology.
- All courses must be approved in advance by the student's supervisor.
- The student's annual program plan must be approved by the supervisor.
- Successful completion of a **comprehensive examination**.
- Writing of a **thesis** under the supervision of a thesis committee (supervisor plus at least three additional faculty members) and its **defence** before an examination committee appointed by the Graduate Department of Kinesiology.
- **Oral defence** of the thesis before an examination committee approved by the School of Graduate Studies.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Flexible-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Kinesiology's additional admission requirements stated below.
- A master's degree from the University of Toronto or a recognized university. Formal graduate training in kinesiology is preferred.
- Successful defence of a master's thesis at a recognized university.
- An academic standing equivalent to a University of Toronto A– (80% to 84%) in the master's degree completed.
- A potential supervisor identified from the Faculty of Kinesiology and Physical Education. A supervisor is not required at the time of application, but applicants are encouraged to begin their search early. See the full list of faculty members. Only applicants who have a supervisor will be admitted to the program.
- Proficiency in the English language must be demonstrated by all applicants educated outside Canada whose primary language is not English and who graduated from a university where the language of instruction and examination was not English. The Faculty prefers the Test of English as a Foreign Language (TOEFL) with the following minimum scores:
  - paper-based test: 600 with 5 on the Test of Written English (TWE) and 50 on the Test of Spoken English (TSE)
  - Internet-based test: 100/120 overall and 22/30 on the writing and speaking sections.

Completion Requirements

- With the approval of the Director, Graduate Studies, some applicants may be admitted to a flexible-time PhD program. This program will benefit mature students with career and/or familial obligations.
- Degree requirements for the flexible-time program are identical to those listed above for the full-time PhD program; however, students have up to eight years to complete the program.
- **Coursework.** Students must successfully complete a total of **1.5 full-course equivalents (FCEs)** as follows:
  - 1.0 FCE from either Kinesiology or another department
  - 0.5 FCE Statistics or Methodology course
- SRD4445H *Doctoral Seminar Series - Compulsory Attendance*, a graduate **seminar** in Kinesiology.
- All courses must be approved in advance by the student's supervisor.
- The student's annual program plan must be approved by the supervisor.
- Successful completion of a **comprehensive examination**.
- Writing of a **thesis** under the supervision of a thesis committee (supervisor plus at least three additional faculty members) and its **defence** before an examination committee appointed by the Graduate Department of Kinesiology.
- **Oral defence** of the thesis before an examination committee approved by the School of Graduate Studies.
- Flexible-time students must register full-time for the first four years of the program. Thereafter, they may register part-time.
- A plan of study and research activities will be negotiated at initial registration, to be reviewed and updated annually.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

Kinesiology: Professional Kinesiology MPK

Note: admissions have been administratively suspended.

The first master's-level program of its kind in Ontario, the **Master of Professional Kinesiology (MPK) degree program** offers students an opportunity to gain advanced knowledge and skills in the professional practice of kinesiology. The MPK provides unparalleled learning environments for hands-on practice working alongside leading practitioners. This program is suitable for those who are just beginning their careers, and those who have experience as registered kinesiologists and are looking for advanced professional development. The MPK program may be completed with a concentration or without a concentration.

MPK Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies.
- Applicants must also satisfy the Graduate Department of Kinesiology's additional admission requirements stated below.
- Applicants must have a four-year bachelor's degree in kinesiology, physical education, human kinetics, or a complementary degree in health science, life science, and/or movement/rehabilitation science. In order to be eligible for admission with a complementary degree, practical experience in the area of kinesiology is required.
- Applicants may also be considered for admission with a four-year bachelor's degree in an area not described above, with at least 5 years of work experience in the area of kinesiology, and evidence of professional training or certification in the area of kinesiology (for example, strength and conditioning certification, physical literacy certification).
- Regardless of the admission pathway, all applicants must have a minimum mid-B average (73% to 76%) in the final year.
- Resumé.
- Two letters of reference. At least one letter must be from an academic referee.
- Letter of intent which identifies the area of interest and reasons for pursuing the program.
- Proficiency in the English language must be demonstrated by all applicants educated outside Canada whose primary language is not English and who graduated from a university where the language of instruction and examination was not English. The Faculty prefers the Test of English as a Foreign Language (TOEFL), with the following minimum scores:
  - paper-based test: 600 with 5 on the Test of Written English (TWE) and 50 on the Test of Spoken English (TSE);
  - Internet-based test: 100/120 overall and 22/30 on the writing and speaking sections.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **12.0 full-course equivalents (FCEs)** as listed below. Consult the department for more details on sequence and timing of courses.
  - MPK4000Y *Introduction to Professional Kinesiology*
  - MPK4001Y *Clinical Assessment and Interventions*
  - MPK4002Y *Biophysical Assessment and Interventions*
  - MPK4003Y *Behavioral Assessment and Interventions*
  - MPK4004Y *Physical, Culture, Health, and Social Environments*
  - MPK4005Y *Strength Based Professional Practice*
  - MPK4006H *Interprofessional Practice*
  - MPK4007Y *Movement for Health and Wellness*
  - MPK4008Y *Evidence Supported Practice*
  - MPK4009H *Business of Kinesiology and Entrepreneurship*
  - MPK4010H *Professional Practice*
  - MPK4012Y *Capstone Project: Improving Kinesiology Practice*
  - MPK4015H *Practice and Program Evaluation*
  - MPK8002H *Placement 1* (300 hours)
  - MPK8003H *Placement 2* (300 hours).
- Within the 12.0 FCEs required to complete the program, students have the option to complete the requirements of a concentration.

Concentrations

- Adapted Physical Activity
- Exercise as Medicine
- Health and Wellness
- High Performance Strength and Conditioning

Concentration Requirements

- Students must follow departmental application procedures and can apply to only one MPK concentration.
- Students must successfully complete a total of **3.0 full-course equivalents (FCEs)** in the area of concentration, including:
  - in at least 1.5 FCEs of MPK courses, complete a major course assignment in the area of concentration
  - a minimum of 300 placement hours in the area of concentration (0.5 FCE)
  - a final capstone project in the area of concentration (1.0 FCE).

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F)
Time Limit: 3 years full-time

Kinesiology: Kinesiology MA, MSc, PhD Courses

Graduate courses in the Department of Kinesiology are divided into A, B, and C course categories. Multidisciplinary courses may be coded in more than one category.

Category A courses include courses on the sociology of sport, sport history, cultural studies of sport, sport policy studies, sport and health ethics, social determinants of health, critical race studies, sport, equity and social justice issues, and in some instances socio-psychological studies of sport.

Category B includes research methodology and methods courses offered in the Graduate Department of Kinesiology. Category C courses include courses on biophysical, behavioural and clinical aspects of sport, exercise and health, motor behaviour and control, biomechanics, neurorehabilitation, muscle plasticity and sport and exercise psychology.
Not all courses are offered every year. Please visit the departmental website for course timetables.

Category A

Course Code	Course Title
KIN1150H	Safeguarding Youth in Sport
KIN5507H	Power, Pleasure/s and the Body: Issues for Physical Cultural Studies
KIN5518H	Physical Cultural Studies and Social Theory
KIN5534H	Sport, Politics, and Social Development
KIN5537H	Health, Media, and Social Change
KIN5544H	Decolonizing Sport Studies
KIN7001H	Directed Reading in Kinesiology
KIN7002H	Directed Research Project in Kinesiology
KIN8233H	Sport Ecology

Category B

Course Code	Course Title
KIN5510H	Qualitative Inquiry and Physical Cultural Studies
KIN5515H	Quantitative Research Methods in Kinesiology
KIN5536H	Qualitative Inquiry in Sport and Physical Activity
KIN5540H	Narrative Methods in Health Research

Category C

Course Code	Course Title
KIN1150H	Safeguarding Youth in Sport
KIN1152H	Psychological Issues in Sport-Related Concussion
KIN5503H	Adaptations to Habitual Activity
KIN5505H	Neuromotor Behaviour
KIN5509H	Applied Muscle Physiology and Biochemistry
KIN5513H	Current Issues in Exercise Psychology
KIN5514H	Human Sensory and Motor Neurophysiology
KIN5525H	Quantitative Motion Analysis
KIN5531H	Skeletal Muscle Plasticity
KIN5533H	Sport Psychology
KIN5534H	Sport, Politics, and Social Development
KIN5535H	Neurorehabilitation and Exercise
KIN5538H	Special Topics in Exercise Oncology
KIN5539H	Advanced Disordered Movement and Neurorehabilitation
KIN5541H	Advanced Exercise Metabolism
KIN5542H	Special Topics in Sport-Related Concussion
KIN5543H	Lifestyle Toxicity and Chronic Disease
KIN5545H	Developing and Reviewing Research Protocols
KIN5546H	Oxygen Delivery and Exercise Performance
KIN5547H	Instrumentation and Signal Processing
KIN5548H	Athlete Development and Human Performance
KIN7001H	Directed Reading in Kinesiology
KIN7002H	Directed Research Project in Kinesiology
KIN8240H	Emerging Issues in Sport Analytics and Data Modelling

Seminars

Course Code	Course Title
SRM3335H	Master's Seminar Series — Compulsory Attendance
SRD4445H	Doctoral Seminar Series — Compulsory Attendance

Laboratory Medicine and Pathobiology

LMP: Introduction

Faculty Affiliation

Medicine

Degree Programs

Laboratory Medicine

MHSc

- Fields:
  - Clinical Embryology;
  - Pathologists' Assistant

Laboratory Medicine and Pathobiology

MSc and PhD

Translational Research in the Health Sciences

MHSc

Combined Degree Programs

MD / PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Biomedical Engineering** (admissions have been administratively suspended)
  - Laboratory Medicine and Pathobiology, MSc, PhD
- **Cardiovascular Sciences**
  - Laboratory Medicine and Pathobiology, MSc, PhD
- **Developmental Biology**
  - Laboratory Medicine and Pathobiology, MSc, PhD
- **Genome Biology and Bioinformatics**
  - Laboratory Medicine and Pathobiology, PhD
- **Musculoskeletal Sciences**
  - Laboratory Medicine and Pathobiology, MSc, PhD
- **Neuroscience**
  - Laboratory Medicine and Pathobiology, MSc, PhD
- **Resuscitation Sciences** (admissions have been administratively suspended)
  - Laboratory Medicine and Pathobiology, MSc, PhD
- **Toxicology**
  - Laboratory Medicine and Pathobiology, MSc, PhD

Overview

As part of the Faculty of Medicine, the Department of Laboratory Medicine and Pathobiology offers unparalleled access to more than 350 expert faculty including basic scientists, pathobiologists, laboratory physicians, and scientists; outstanding case material; a stunning array of research opportunities; diverse training sites; engaging student-run organizations.

Research Foci

Antimicrobial Resistance: Surveillance and Mechanisms
Bone and Connective Tissue Diseases including Disorders of Mineral Metabolism
Cancer Pathogenesis and Prevention Cardiovascular Disease
Cell-Matrix Interactions
Development: Cell Cycle, Differentiation, Signalling Diabetes
Endocrine and Neuroendocrine Disorders
Hematopathology and Transfusion Medicine
Immunopathology and Transplantation
Inflammatory Disorders
Lipid Disorders
Lymphatic Pathobiology
Microbial Pathogenesis
Molecular Biomarkers
Neurodegenerative Disorders
Proteomics and Bioinformatics
Protein Structure and Function
Toxicology
Translational Research
Vascular Cell Biology
Viral Diseases

For details, consult the departmental website.

Contact and Address

Laboratory Medicine and Pathobiology Program

Web: www.lmp.utoronto.ca
Email: lmp.grad@utoronto.ca
Telephone: (416) 978-2663
Fax: (416) 978-7361

Department of Laboratory Medicine and Pathobiology
University of Toronto
Medical Sciences Building
Room 6209, 1 King's College Circle
Toronto, Ontario M5S 1A8 Canada

Translational Research in the Health Sciences Program

Web: trp.utoronto.ca
Email: trp@utoronto.ca
Telephone: (416) 978-4474

University of Toronto
Old Administration Building
263 McCaul, Room 120
Toronto, ON, M5T 1W7 Canada

LMP: Graduate Faculty

Full Members

Abdelhaleem, Mohamed - MSc, MBChB, PhD
Adeli, Khosrow - DipChem, MSc, PhD
Aubert, Isabelle - BSc, PhD
Bapat, Bharati - BSc, MSc, PhD
Barber, Dwayne - BSc, PhD
Bendeck, Michelle - BSc, PhD
Boggs, Joan - MSc, PhD
Branch, Donald - BA, BSc, PhD
Bremner, Roderick Angus - BSc, PhD
Brown, Martha - BSc, MSc, PhD
Buchan, Alison - BSc, MASc, PhD
Chandran, Vinod - MBBS, PhD
Coburn, Bryan - BSc, DrMed
Cole, David - BSc, MD, PhD
Connelly, Philip - BA, PhD
Cutz, Ernest - MD
Cybulsky, Myron - MD
Das, Sunit - DrMed
Delabie, Jan - MD, PhD
Dennis, James - PhD
Diamandis, Eleftherios - BSc, MD, PhD
Diamandis, Phedias - BS, MD, PhD
Dirks, Peter Benjamin - MD, PhD
Done, Susan - BA, BCh, MA, MB, MBA, PhD
Drewlo, Sascha - PhD
Drucker, Daniel - MD
Elsholtz, Harry - BSc, MSc, PhD
Epelman, Slava - MD, DrMed
Gallinger, Steven - MSc, MD
Gilbert, Richard - MBBS, PhD
Ginsberg, Howard - BSc, LRCP, MD, PhD
Girardin, Stephen - BSc, PhD
Gladdy, Rebecca - DrMed, PhD
Goldenberg, Anna - PhD, PhD
Gopalkrishnan, Rahul - PhD
Gotlieb, Avrum - BSc, MDCM
Grynpas, Marc - MSc, PhD
Gupta, Neeru - BM
Hamel, Paul - BSc, PhD
Hamilton, Robert - BSc, MD, PhD
Harrison, Rene - BS, MS, PhD
Hawkins, Cynthia - MD, PhD
Hazrati, Lili-Naz - BSc, MD, MSc, PhD
Hedley, David - MD
Hegele, Richard - MD
Hinek, Aleksander - MD, PhD
Hu, Jim - BSc, PhD
Huang, Annie - MD
Husain, Mansoor - MB, MD
Hwang, David - BSc, MD, PhD
Ingelsson, Sven Martin - MD, PhD
Irwin, David - BSc, PhD
Jamieson, Frances - MD
Jarvi, Keith - MD
Joshi-Sukhwal, Sadhna - BSc, MSc, DSc, PhD
Jothy, Serge - MD, MSc, PhD
Juvet, Stephen - DrMed, PhD
Kain, Kevin - MD
Kalia, Lorraine - BSc, MD, PhD
Kalia, Suneil - BSc, MD, PhD
Kamel-Reid, Suzanne - BA, MA, PhD
Kandel, Rita - MD ***(Chair and Graduate Chair)***
Kapoor, Mohit - BPhm, MSc, PhD
Karoubi, Golnaz - BSc, PhD
Keating, Armand - BSc, MD
Khokha, Rama - BSc, MSc, PhD
Laflamme, Michael - BS, MD, PhD
Lazarus, Alan - PhD
Lee, Jeffrey - BSc, PhD
Lee, Warren - MD, PhD
Leong-Poi, Howard - MD
Levy, Gary - BSc, MD
Licht, Christoph - MD
Lingwood, Clifford - BSc, PhD
MacParland, Sonya - BS, MS, PhD
Marsden, Philip - MD
Mazzulli, Tony - MD
McCulloch, Christopher - BSc, DDS, PhD
McGeer, Allison - BSc, MSc, MD
McKerlie, Colin - DVM, DVSM
McLaurin, Joanne - BSc, MSc, PhD
Mekhail, Karim - BSc, PhD
Mitchell, Jennifer - DSc
Mogridge, Jeremy - BSc, PhD
Mubareka, Samira - MD
Ni, Heyu - MSc, MD, PhD
O'Brien, Catherine - BSc, MSc, DrMed, PhD
Ohh, Michael - BSc, PhD
Opas, Michal - MSc, PhD
Ostrowski, Mario - MD
Palaniyar, Nades - MSc, PhD
Post, Martin - PhD
Poutanen, Susan - MD, MPH
Pritzker, Kenneth - BSc, MD
Prud'homme, Gerald - MD
Rajalakshmi, Srinivasan - BSc, MA, PhD
Rand, Margaret - BSc, PhD
Richardson, Susan - BSc, MDCM
Robbins, Clinton Shane - BS, PhD
Robertson, Janice - BSc, PhD
Rosenblum, Norman - MD
Rozakis-Adcock, Maria - BSc, PhD
Rudzicz, Frank - PhD
Rutka, James - BSc, LMCC, MD, PhD
Saleeb, Rola - MBChB, PhD
Schmitt-Ulms, Gerold - BSc, MSc, DrRerNat
Schuurmans, Carol - PhD
Scott, James - BSc, PhD
Semple, John - PhD
Seth, Arun - MS, PhD
Shaw, Patricia - SB, MD
Sherman, Philip - MD
Shlien, Adam - BS, PhD
Sivak, Jeremy - PhD
Strauss, Bradley - MD
Swallow, Carol - BA, MD, PhD
Taylor, Michael - BSc, DrMed, PhD

Templeton, Douglas - BSc, MD, PhD ***(Coordinator of Graduate Studies)***
Tenenbaum, Howard - DipPerio, DDS, PhD
Thorner, Paul - MD, DPhil
Tsao, Ming-Sound - BSc, MD
van der Kwast, Theodorus - MD, PhD
Wallace, Valerie - BSc, PhD
Wang, Chen - MD, PhD
Wilson, Gregory - MD, MSc
Wong, Amy - BS, MS, PhD
Yang, Burton - BSc, MSc, PhD
Yousef, George - MD, MSc, PhD
Yucel, Yeni - MD
Yuen, Darren - BSc, MD, PhD
Zacksenhaus, Eldad - PhD
Zhang, Li - MD, MSc, PhD

Members Emeriti

Butany, Jagdish - MBBS, MS
Marks, Alexander - MD, PhD
Yeger, Herman - BSc, MScPhm, PhD

Associate Members

Allen, Vanessa G. - BA, MD
Antoniou, Tony - BScPhm, PhD
Ballios, Brian G. - MD, PhD
Berman, Hal K. - MD, PhD
Bowman, Kerry - BA, BSW, MSW, PhD
Campigotto, Aaron - BS, MS, MD
Chang, Hong - MSc, MD, PhD
Chau, Janet - BSc
Chronis-Brown, Pat - BTech, MSc
Clutterbuck, David - BSc
Conner, James - AB, MD, PhD
Demicco, Elizabeth - SB, MD, PhD
Dickson, Brendan C. - BSc, MSc, MD
Dmetrichuk, Jennifer - BS, MBChB, PhD
Downes, Michelle - MD
Faragalla, Hala - MS, MD, MBChB
Ferenbok, Joseph - PhD, PhD
Gandhi, Rajiv - BSc, MSc, MD
Gao, Andrew - BSc, MSc, MD
Gauda, Estelle - MD
Greenblatt, Ellen - BSc, MD
Greenfeld, Elena - MD, PhD
Gubbay, Jonathan B. - BSc, MBBS, MSc
Hamilton, Scot - BS, MS, PhD
Hojilla, Carlo - BS, MD, PhD
Hurtig, Mark - MSc, DVM
Johnstone, Jennie - BSc, MD, PhD
Jones, Claire - BSc, MD
Jung, Benjamin - BS, MS, PhD
Keating, Sarah - MSc, MD
Kiernan, Jeffrey - BSc, MSc, PhD
Kingdom, John - DipCH, MB, MD
Kongkham, Paul - BSc, MD, PhD
Konvalinka, Ana - DrMed
Kozak, Robert Andrew - BSc, DPhil
Kulasingam, Vathany - BSc, PhD
Lerner-Ellis, Jordan - BS, PhD
Li, Ren-Ke - MHSc, MSc, MD, PhD
Liu, Kimberly - BA, MD
Lu, Fang-I - MD
Madjunkova, Svetlana - MSc, MD, PhD
Marshall, Christian - BS, PhD
McKee, Trevor D. - BSc, PhD
Melano, Roberto - MSc, PhD
Millar, Adam - BSc, MSc, MD
Moraes, Theo - MD
Moskovtsev, Sergey - MD, PhD
Mullen, J. Brendan - BSc, MD
Munoz, David - MSc, MD
Nofech-Mozes, Sharon - MD
Noor, Abdul - BS, MPH, PhD
Paprica, Alison - DSc
Parks, William - AB, MD
Pasic, Maria - BS, PhD
Pavenski, Katerina - BSc, MD
Pendergrast, Jacob - BSc, MD
Philpott, Dana - BS, PhD
Pollanen, Michael - BSc, MD, PhD
Richard-Greenblatt, Melissa - BSc, PhD
Riddell, Robert - LMCC, LRCP, MBBS
Rouzbahman, Marjan - MD
Sakhdari, Ali - MSc, MD
Seidman, Michael - BA, MD, MPH, PhD
Selvaratnam, Rajeevan - BS, PhD
Shapiro, Heather - BSc, MD
Sherman, Christopher - BSc, MD
Siddiqui, Iram - MS, MBBS
Sierra, Sony - BSc, BSc(OT), MSc, MD
Snelgrove, John - BSc, MSc, MD
Somers, Gino - MBBS, BMedSc, PhD
Spears, Melanie - BS, PhD
Stavropoulos, Dimitri James - BSc, MSc, PhD
Stockley, Tracy - BSc, PhD
Sung, Hoon-Ki - MD, MS, PhD
Tadros, Manal - MS, MBChB, PhD
Taher, Jennifer - BSc, PhD
Tein, Ingrid - MD
Thu, Kelsie - BSc, PhD
Tsoi, Kim - BASc, MD, PhD
Tsui, Hubert - BSc, MD, PhD
Weinreb, Ilan - MD
Wilson, Gavin Walter - MS, BMedSc, PhD
Yoon, Ju-Yoon - BSc, MSc, MD
Zhang, Lingxin – MBBS

LMP: Laboratory Medicine MHSc

The **Master of Health Science (MHSc)** in Laboratory Medicine is a two-year professional (coursework and practicum) master's degree designed to educate and train highly skilled health laboratory scientists in one of **two fields: Pathologists' Assistant (PA) or Clinical Embryology (CE)**. The program imparts general core knowledge and skills and the specific basic and applied principles of anatomic pathology or of assisted reproductive technology (ART) required to work as laboratory scientists. These principles are the foundation upon which PAs or CEs develop fundamental applied and practical knowledge and skills to function as competent, high-quality clinical scientists.

The nature of this graduate program equips trainees to apply their knowledge to complex decision making, to serious ethical issues, and to develop a strong sense of personal accountability and intellectual rigour and independence.

LMP: Laboratory Medicine MHSc; Field: Clinical Embryology

MHSc Program; Field: Clinical Embryology

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Laboratory Medicine and Pathobiology's additional admission requirements stated below.
- Admission is based on demonstrated exceptional scholarly achievement, using the following criteria:
  - One-page statement summarizing how this program will contribute to the advancement of the applicant's professional goals, identifying their field of preference.
  - Curriculum vitae (CV).
  - Two letters of reference, one of which should be familiar with the applicant's scholarly activities.
- Applicants must have an appropriate four-year BSc degree in the life sciences or equivalent from a recognized university, with an average of at least B+ in the last two years of full-time study. Applicants must have a demonstrated interest in human biological and life sciences, preferably with a major or specialist program in the life sciences. Applicants must have completed at least one university-level course in each of the following disciplines: human physiology, human biology, mathematics, and chemistry. Courses in human anatomy, biostatistics, and biomedical research are desirable but not mandatory.
  - All potential students will be interviewed prior to final acceptance into the program. The initial selection of students will be based on a combination of their academic record, individual statement, and letters of reference. These students will be asked to participate in an interview with the program coordinator to determine the fit with the program and student's goals.
- Applicants who were educated outside Canada, whose primary language is not English and who graduated from a university where the language of instruction and examination was not English, must demonstrate proficiency in the English language through the successful completion of the following tests:
  - Test of English as a Foreign Language (TOEFL) with the following minimum required scores: Internet-based TOEFL: 100/120 and 22/30 on the writing and speaking sections.
  - International English Language Testing Systems (IELTS) required score: 8.0 (Academic) with at least 6.5 for each component.
  - Certificate of English Proficiency (COPE) with the following minimum required scores: 86 total with 22 on the listening component, 22 on the reading component, and 32 on the writing component.
  - School of Continuing Studies, University of Toronto, Academic English course. Required score: a final grade of B in Level 60 (Advanced).

Completion Requirements

- **Coursework.** Students must successfully complete a total of **9.5 full-course equivalents (FCEs)** as follows:
  - 3.5 FCEs taken by all students:
    - LMP2000H *Cell and Molecular Biology*
    - LMP2001H *Biomedical Research Methods*
    - LMP2002H *Clinical Laboratory Management*
    - LMP2003H *Biomedical Ethics*
    - LMP2004H *Biostatistics*
    - LMP2005Y *Capstone Project in Laboratory Medicine*
  - 4.0 FCEs specific to this field:
    - LMP2100H *Advanced Reproductive Physiology and Pathology*
    - LMP2102H *Foundations in ART (Assisted Reproductive Technology)*
    - LMP2103H *Reproductive Genetics*
    - LMP2104H *Applied Methods in ART*
    - LMP2105H *Innovations in ART*
    - LMP2106H *Current Topics in Causes and Treatment of Infertility*
    - LMP2107H *Applied ART Laboratory Decision Making*
    - MSC1008H *Advanced Human Embryology and Teratology*
  - 1.5 FCEs of practicum courses
    - LMP2108H *CE Lab Simulation I*
    - LMP2109H *CE Lab Simulation II*
    - LMP2110H *ART Lab Rotations*
  - 0.5 elective FCE chosen from a course offered in LMP or any other graduate department, with approval of the field director.
- Students who fail a course will be offered remediation in the form of additional readings and assignments by the course director. If a student fails two courses or the offered remediation, they will be required to repeat the year.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

LMP: Laboratory Medicine MHSc; Field: Pathologists' Assistant

MHSc Program; Field: Pathologists' Assistant

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Laboratory Medicine and Pathobiology's additional admission requirements stated below.
- Admission is based on demonstrated exceptional scholarly achievement, using the following criteria:

    - One-page statement summarizing how this program will contribute to the advancement of the applicant's professional goals, identifying their field of preference.
    - Curriculum vitae (CV).
    - Two letters of reference, one of which should be familiar with the applicant's scholarly activities.
- Applicants must have an appropriate four-year BSc degree in the life sciences or equivalent from a recognized university, with an average of at least B+ in the last two years of full-time study. Applicants must have a demonstrated interest in human biological and life sciences, preferably with a major or specialist program in the life sciences. Applicants must have completed at least one university-level course in each of the following disciplines: human physiology, human biology, mathematics, and chemistry. Courses in human anatomy, biostatistics, and biomedical research are desirable but not mandatory.
    - All potential students will be interviewed prior to final acceptance into the program. The initial selection of students will be based on a combination of their academic record, individual statement, and letters of reference. These students will be asked to participate in an interview with the program coordinator to determine the fit with the program and student's goals.
- Applicants who were educated outside Canada, whose primary language is not English and who graduated from a university where the language of instruction and examination was not English, must demonstrate proficiency in the English language through the successful completion of the following tests:
    - Test of English as a Foreign Language (TOEFL) with the following minimum required scores: Internet-based TOEFL: 100/120 and 22/30 on the writing and speaking sections.
    - International English Language Testing Systems (IELTS) required score: 8.0 (Academic) with at least 6.5 for each component.
    - Certificate of English Proficiency (COPE) with the following minimum required scores: 86 total with 22 on the listening component, 22 on the reading component, and 32 on the writing component.
    - School of Continuing Studies, University of Toronto, Academic English course. Required score: a final grade of B in Level 60 (Advanced).

Completion Requirements

- **Coursework.** Students must successfully complete a total of **9.5 full-course equivalents (FCEs)** as follows:
    - 3.5 FCEs taken by all students:
        - LMP2000H *Cell and Molecular Biology*
        - LMP2001H *Biomedical Research Methods*
        - LMP2002H *Clinical Laboratory Management*
        - LMP2003H *Biomedical Ethics*
        - LMP2004H *Biostatistics*
        - LMP2005Y *Capstone Project in Laboratory Medicine*
    - 2.0 FCEs specific to this field:
        - LMP2200H *Basic Principles in Human Pathobiology and Pathophysiology*
        - LMP2201H *Anatomy and Pathology of Organ Systems*
        - LMP2208H *Biobanking for Research*
        - LMP2211H *Advanced Anatomy Dissection*
    - 4.0 FCEs of practicum courses
        - LMP2202H *Practicum in Surgical Pathology I*
        - LMP2203H *Practicum in Surgical Pathology II*
        - LMP2204H *Practicum in Surgical Pathology III*
        - LMP2205H *Practicum in Surgical Pathology IV*
        - LMP2206H *Practicum in Autopsy Pathology*
        - LMP2207H *Practicum in Forensic Pathology I*
        - LMP2209H *Practicum in Surgical Pathology V*
        - LMP2210H *Practicum in Surgical Pathology VI*
- Students who fail a course will be offered remediation in the form of additional readings and assignments by the course director. If a student fails two courses or the offered remediation, they will be required to repeat the year.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

LMP: Laboratory Medicine and Pathobiology MSc

The **Master of Science (MSc) program** emphasizes the development of analytical technologies, the application of basic research techniques in biochemistry, cell biology, clinical biochemistry, experimental pathology, genetics, immunology, and molecular biology to the study of mechanisms of cell and tissue injury and the pathogenesis of disease. The program also emphasizes the nature, mechanisms, therapy, and prevention of microbial diseases in humans, as well as the processes by which pathogenic microbes are spread.

MSc Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Laboratory Medicine and Pathobiology's additional admission requirements stated below.
- Applicants must have completed, or be about to complete, one of the following:
    - Pathobiology Specialist program
    - an appropriate bachelor's degree in life sciences from a recognized university
    - professional degree (for example, MD, DDS, DVM, or equivalent).
- A minimum A– average over the final two years of undergraduate study.
- Two strong letters of recommendation from faculty members familiar with the applicant's academic work.
- Detailed curriculum vitae (CV).
- Statement of intent (approximately 250 words).
- Research experience evidenced by publications, abstracts, or presentations is an asset.
- Successful applicants are selected by the departmental admissions committee on the basis of academic excellence.

- Admission is finalized when a graduate faculty member agrees to supervise the student's research and guarantees a full stipend for the student.

Completion Requirements

- **Coursework.** Students must complete **1.5 full-course equivalents (FCEs)** as follows:
  - LMP1005H *Fundamentals of Research Practice*
  - LMP1001H *Student Seminar I* and LMP1002H *Student Seminar II*
- Completion of a **thesis** under the direction of the student's supervisor, assisted by the advisory committee.
- The research content of the MSc thesis is expected to generate the equivalent of one paper published in a peer-reviewed scientific journal.
- **Residence.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW)
Time Limit: 3 years full-time

LMP: Laboratory Medicine and Pathobiology PhD

The PhD program emphasizes the development of analytical technologies, the application of basic research techniques in biochemistry, cell biology, clinical biochemistry, experimental pathology, genetics, immunology, and molecular biology to the study of mechanisms of cell and tissue injury and the pathogenesis of disease. The program also emphasizes the nature, mechanisms, therapy, and prevention of microbial diseases in humans, as well as the processes by which pathogenic microbes are spread.

Applicants may enter the PhD program via one of three routes: 1) following completion of an MSc degree; 2) transfer from the University of Toronto MSc program; or 3) direct entry following completion of a BSc degree.

A limited number of selected students may enter the combined degree program in Medicine, Doctor of /Doctor of Philosophy (MD/PhD) subject to admission into both the departmental PhD program and the MD program.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Laboratory Medicine and Pathobiology's additional admission requirements stated below.
- Research experience evidenced by peer-reviewed publications, abstracts, or presentations is normally required.
- Three strong letters of recommendation from faculty members familiar with the applicant's academic work. Normally, one of the referees should be the applicant's research supervisor.
- A detailed curriculum vitae (CV).
- Statement of intent (approximately 250 words).
- Applicants are selected by the departmental admissions committee on the basis of academic excellence. Admission to the program is finalized when a graduate faculty member agrees to supervise the student's research and guarantees a full stipend for the student.
- A limited number of selected students may enter the MD/PhD combined degree program subject to admission into both the departmental PhD program and the MD program.

Completion Requirements

- **Coursework.** Students must complete **1.0 full-course equivalent (FCE)** as follows:
  - LMP1003H *Student Seminar III*
  - an additional 0.5 elective FCE
- The PhD **thesis** is completed under the direction of the candidate's supervisor, assisted by the advisory committee. The PhD thesis must demonstrate a substantial contribution to laboratory medicine and pathobiology, involving a systematic investigation of disease-related hypotheses. The emphasis is on quality of the science and its presentation. The PhD thesis is normally expected to yield the equivalent of three publications in refereed scientific journals.
- **Residence.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- Be enrolled in the MSc program in Laboratory Medicine and Pathobiology. Excellent students with high academic standing (normally a minimum A- average on MSc courses) who have clearly demonstrated the ability to do research at the doctoral level may be considered for transfer to the PhD program. Recommendation of the advisory committee is required.
- Successfully complete a reclassification transfer exam within 24 months of starting the MSc Program.
- Successfully complete LMP1001H *Student Seminar I* and LMP1005H *Fundamentals of Research Practice* at the master's level.
- Be concurrently enrolled in LMP1002H *Student Seminar II* at the time of writing the reclassification exam.

Completion Requirements

- **Coursework.** Students must complete **2.5 full-course equivalents (FCEs)** as follows:
  - LMP1005H *Fundamentals of Research Practice*
  - LMP1001H *Student Seminar I*
  - LMP1002H *Student Seminar II*
  - LMP1003H *Student Seminar III*
  - an additional 0.5 elective FCE.
- The PhD **thesis** is completed under the direction of the candidate's supervisor, assisted by the advisory committee. The candidate normally defends the thesis before a departmental committee, and subsequently before a committee approved by the School of Graduate Studies. Candidates may, with the recommendation of their advisory committee, request a waiver of the departmental defence, subject to approval by the Graduate Coordinator.
- The PhD thesis must demonstrate a substantial contribution to laboratory medicine and pathobiology, involving a systematic investigation of disease-related hypotheses. The emphasis is on quality of the science and its presentation. The PhD thesis is normally expected to yield the equivalent of three publications in refereed scientific journals.
- **Residence.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Direct entry is available for highly qualified BSc graduates who have completed the Pathobiology Specialist program or an appropriate undergraduate program in the life sciences from a recognized university with a minimum A average in the final two years and relevant research experience.
- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Laboratory Medicine and Pathobiology's additional admission requirements stated below.
- Research experience evidenced by peer-reviewed publications, abstracts, or presentations is normally required.
- Three strong letters of recommendation from faculty members familiar with the applicant's academic work. Normally, one of the referees should be the applicant's research supervisor.
- A detailed curriculum vitae (CV).
- Statement of intent (approximately 250 words).
- Applicants are selected by the departmental admissions committee on the basis of academic excellence. Admission to the program is finalized when a graduate faculty member agrees to supervise the student's research and guarantees a full stipend for the student.

Completion Requirements

- **Coursework.** Students must complete **2.5 full-course equivalents (FCEs)** as follows:
  - LMP1005H *Fundamentals of Research Practice*
  - LMP1001H *Student Seminar I*
  - LMP1002H *Student Seminar II*
  - LMP1003H *Student Seminar III*
  - an additional 0.5 elective FCE
- The PhD **thesis** is completed under the direction of the candidate's supervisor, assisted by the advisory committee. The candidate normally defends the thesis before a departmental committee, and subsequently before a committee approved by the School of Graduate Studies. Candidates may, with the recommendation of their advisory committee, request a waiver of the departmental defence, subject to approval by the Graduate Coordinator.
- The PhD thesis must demonstrate a substantial contribution to laboratory medicine and pathobiology, involving a systematic investigation of disease-related hypotheses. The emphasis is on quality of the science and its presentation. The PhD thesis is normally expected to yield the equivalent of three publications in refereed scientific journals.
- **Residence.** Students must be on campus and participating for the duration of their registration in the program.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

LMP: Translational Research in the Health Sciences MHSc

This two-year, course-based program is designed for interprofessional students from diverse backgrounds (such as medicine, life sciences, social sciences, engineering, design, and communications) who want to learn creative problem-solving skills, strategies, and competencies to translate (scientific) knowledge into innovations that improve medicine, health, and care.

Through flexible coursework, team-based, real-world translational challenges, and extensive mentorship and networking, the department facilitates self-directed collaborative "learning by doing": students gain experience, expertise, and practical insights into development and design processes, regulatory frameworks, and translational networks and strategies to develop, lead, test, and implement innovations. The program's mission is to challenge students to think differently so that they learn to champion change in their communities and contexts.

This cohort-based program commences in September.

MHSc Program

Minimum Admission Requirements

- Applicants are admitted on the basis of academic preparation, references, and motivation. All applicants must demonstrate exceptional scholarly achievement and significant research experience.
- An appropriate bachelor's (BSc) degree or an MD degree from a recognized university, and academic credentials and background preparation appropriate to the area of study with an A– average in at least three of the four years.
- Applicants with significant research, industry, or government experience in professional health science or related social science, and/or academic research master's or PhD are also encouraged to apply.
- The application must be accompanied by:
  - A current curriculum vitae (CV).
  - A letter of intent or statement of professional goals.
  - Three letters of reference.
- Applicants whose primary language is not English, and who graduated from a university where the language of instruction was not English, must demonstrate proficiency in the English language through the successful completion of the following English-language proficiency tests:
  - Test of English as a Foreign Language (TOEFL): a minimum score of 600 on the paper-based test and 5 on the Test of Written English (TWE); or a minimum score of 93/120 on the Internet-based test and 22/30 on the writing and speaking sections.
  - Tests must be completed in the year prior to application to the program.
- Admission spots are limited; not all applicants who meet the prerequisites will be admitted. Applicants are screened for eligibility and short-listed applicants will be interviewed.

Completion Requirements

- Within this two-year, five-session program, students must complete a total of **8.0 full-course equivalents (FCEs)** as follows:
  - Year 1:
    - LMP2300Y *Foundations in Translational Research* (Fall and Winter)
    - LMP2320H *Overview of Methods in Practices and Contexts* (Winter)
    - LMP2322H *Information, Media, and Communication Literacy for the Sciences* (Fall)
    - LMP2301Y *Projects in Translational Research* (Fall and Winter)
    - LMP2330Y *Capstone Project in Translational Research* (Summer).
  - Years 1 and 2:
    - 2.0 FCEs: eight modular courses.
  - Year 2:
    - LMP2330Y *Capstone Project in Translational Research* (Fall and Winter)
    - 1.0 elective FCE with approval from the Program Director.

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW)
Time Limit: 3 years full-time

LMP: Laboratory Medicine and Pathobiology MSc, PhD Courses

Not all courses are offered every year. Please check the departmental website for course availability.

Course Code	Course Title
LMP1001H	Student Seminar I
LMP1002H	Student Seminar II
LMP1003H	Student Seminar III
LMP1005H	Fundamentals of Research Practice
LMP1100H	Cellular Imaging in Pathobiology
LMP1101H	Basic Concepts in Inflammatory/Autoimmune Arthritis
LMP1102H	Clinical Concepts in Inflammatory/Autoimmune Arthritis
LMP1103H	Tissue Injury, Repair, and Regeneration
LMP1104H	Current Understanding of Ischemic Heart Disease
LMP1105H	Current Understanding of Atherosclerosis
LMP1106H	Molecular Biology Techniques
LMP1107H	Bioinformatics in LMP
LMP1108H	Genomic Analysis in Medicine
LMP1109H	Advanced Concepts in Cancer Biology
LMP1110H	Neural Stem Cells: Brain Development and Maintenance
LMP1111H	Introduction to R and the Analysis of Single Cell Data
LMP1200H	Neoplasia
LMP1201H	Research Techniques in Molecular Biology and Pathobiology
LMP1202H	Inflammation, Immunity, and Immunopathology of Atherosclerosis
LMP1203H	Analytical Clinical Biochemistry: Basic Principles

Course Code	Course Title
LMP1204H	Translational Research in Pathobiology
LMP1205H	The Role of Genomics in the Era of Personalized Medicine
LMP1206H	Next Generation Genomics in Clinical Medicine
LMP1207H	Mass Spectrometry, Proteomics, and Their Clinical Applications
LMP1208H	Molecular Clinical Microbiology and Infectious Diseases
LMP1209H	Neurodegenerative Disease — Mechanisms, Models, and Methods
LMP1210H	Basic Principles of Machine Learning in Biomedical Research
LMP1300Y	General and Special Pathology

LMP: Laboratory Medicine MHSc Courses

Not all courses are offered every year. Please check the departmental website for course availability.

Core Courses

Course Code	Course Title
LMP2000H	Cell and Molecular Biology
LMP2001H	Biomedical Research Methods
LMP2002H	Clinical Laboratory Management
LMP2003H	Biomedical Ethics
LMP2004H	Biostatistics
LMP2005Y	Capstone Project in Laboratory Medicine

Clinical Embryology Courses

Course Code	Course Title
LMP2006H	Individual Reading/Research Course
LMP2100H	Advanced Reproductive Physiology and Pathology
LMP2102H	Foundations in ART (Assisted Reproductive Technology)
LMP2103H	Reproductive Genetics
LMP2104H	Applied Methods in ART
LMP2105H	Innovations in ART
LMP2106H	Current Topics in Causes and Treatment of Infertility
LMP2107H	Applied ART Laboratory Decision Making
LMP2108H	Clinical Embryology Laboratory Simulation I
LMP2109H	Clinical Embryology Laboratory Simulation II
LMP2110H	ART Lab Rotations
MSC1008H	Advanced Human Embryology and Teratology

Pathologists' Assistant Courses

Course Code	Course Title
LMP2006H	Individual Reading/Research Course
LMP2200H	Basic Principles in Human Pathobiology and Pathophysiology
LMP2201H	Anatomy and Pathology of Organ Systems
LMP2202H	Practicum in Surgical Pathology I
LMP2203H	Practicum in Surgical Pathology II
LMP2204H	Practicum in Surgical Pathology III
LMP2205H	Practicum in Surgical Pathology IV
LMP2206H	Practicum in Autopsy Pathology
LMP2207H	Practicum in Forensic Pathology
LMP2208H	Biobanking for Research
LMP2209H	Practicum in Surgical Pathology V
LMP2210H	Practicum in Surgical Pathology VI
LMP2211H	Advanced Anatomy Dissection

LMP: Translational Research in the Health Sciences MHSc Courses

Required Courses

Course Code	Course Title
LMP2300Y	Foundations in Translational Research
LMP2301Y	Projects in Translational Research
LMP2320H	Overview of Methods in Practices and Contexts
LMP2322H	Information, Media, and Communication Literacy for the Sciences

Course Code	Course Title
LMP2330Y	Capstone Project in Translational Research

Modular Courses (Credit/No Credit; 0.25 FCE each)

Course Code	Course Title
LMP2340H	Project Management I
LMP2341H	Project Management II
LMP2342H	Intellectual Property Fundamentals
LMP2343H	Applied Intellectual Property
LMP2344H	Translational Thinking
LMP2345H	Procurement, Privacy, and Regulatory Affairs
LMP2346H	Grant Writing
LMP2347H	Economics of Healthcare
LMP2348H	Knowledge Translation and the Community
LMP2349H	Student Work and Research Module (SWARM)
LMP2350H	Professionalism
LMP2351H	Leadership
LMP2352H	Intrapreneurship, Entrepreneurship, and Business Model Design
LMP2353H	Introduction to AI in Healthcare
LMP2354H	Hacking Network
LMP2355H	Business Thinking
LMP2390H	Selected Topics

Law

Law: Introduction

Faculty Affiliation

Law

Degree Programs

Law

LLM

- Concentrations:
  - Business Law;
  - Criminal Law;
  - Health Law, Ethics and Policy;
  - Legal Theory
- Dual Degree Programs:
  - LLB (National University of Singapore) / LLM (University of Toronto);
  - LLB (Torcuato Di Tella University) / LLM (University of Toronto);
  - LLB (Tsinghua University) / LLM (University of Toronto); (admissions have been administratively suspended)
  - LLM (University of Toronto) / JM (Tsinghua University); (admissions have been administratively suspended)
  - LLM (University of Toronto) / LLM (Tsinghua University) (admissions have been administratively suspended)

MSL

SJD

Global Professional Law

GPLLM

- Concentrations:
  - Business Law;
  - Canadian Law in a Global Context;
  - Innovation, Law and Technology

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Bioethics** (admissions have been administratively suspended)
  - Law, LLM, SJD
- **Global Health (U of T Global Scholar)**
  - Law, LLM, SJD
- **Jewish Studies**
  - Law, LLM, MSL, SJD
- **Sexual Diversity Studies**
  - Law, LLM, MSL, SJD
- **Women and Gender Studies**
  - Law, LLM, SJD

Overview

The international reputation of the law school's faculty, their breadth of interests and approaches, and the intensive intellectual atmosphere, create outstanding opportunities for graduate students pursuing advanced degrees.

Law faculty members are some of the finest doctrinal and theoretical legal scholars in public and private law. The diversity of research interests amongst the faculty allows them to supervise graduate research in almost all areas of legal scholarship. The pluralistic academic community invites a variety of approaches to legal scholarship including, but not limited to, feminism and the law, law and economics, legal history, law and society, analytical jurisprudence, and critical legal theory. Over a third of the faculty are cross-appointed to other units — a commitment to interdisciplinary scholarship which encourages students to position their legal research within a broader, interdisciplinary context.

Strong relationships with faculty members are forged by the supervisory relationship, as well as through numerous informal opportunities to interact with faculty. The many workshops, lecture series, seminars and roundtables foster a dynamic intellectual environment. Through the Distinguished Visiting Faculty program, students have the opportunity to meet with and learn from some of the world's finest legal scholars.

In addition to the formal study program, graduate students can participate in internships through Pro Bono Students Canada and the International Human Rights Program.

Inquiries should be directed to the Graduate Program Coordinator, Graduate Program, Faculty of Law at the address below.

Contact and Address

LLM, MSL, and SJD Program Inquiries

Web: www.law.utoronto.ca/academic-programs/graduate-programs
Email: gradadmissions.law@utoronto.ca
Telephone: (416) 978-0213

University of Toronto Faculty of Law
Graduate Programs
Falconer Hall
78 Queen's Park
Toronto, Ontario, M5S 2C5 Canada

GPLLM Program Inquiries

Web: gpllm.law.utoronto.ca
Email: admissions.gpllm@utoronto.ca
Telephone: (416) 946-7384

University of Toronto Faculty of Law
GPLLM Program
Falconer Hall
78 Queen's Park
Toronto, Ontario, M5S 2C5 Canada

Law: Graduate Faculty

Full Members

Aidid, Abdi - BA, JD, LLM
Alarie, Benjamin - LLB, AB, LLM, MA, Osler Chair in Business Law
Anand, Anita - BA, LLB, MA, LLM
Austin, Lisa - BA, BSc, LLB, MA, Chair in Law and Economics of Intellectual Property
Bedard-Rubin, Jean-Christophe - LLB
Benson, Peter - LLB, LLM, PhD
Borrows, John - LLB, LLM, MA, LLD
Brunnée, Jutta - LLM, SJD, James Marshall Tory Dean's Chair ***(Dean)***
Chiao, Vincent - BA, JD, PhD
Cossman, Brenda - LLB, LLM, Goodman/Schipper Chair ***(Associate Dean, Research)***
Dawood, Yasmin - BA, JD, MA, PhD
Drassinower, Abraham - BPhil, LLB, MA, PhD
Dubber, Markus - AB, JD
Dyzenhaus, David - BA, LLB, DPhil
Emon, Anver - LLB, BA, LLM, MA, PhD, SJD, CRC
Essert, Christopher - BA, LLM, JD, SJD
Fadel, Mohammad - BA, JD, PhD
Fernandez, Angela - LLB, BA, BCL, LLM, MA, SJD
Flood, Colleen - LLB, LLM, SJD
Green, Andrew - LLB, BA, LLM, MA, PhD, Metcalf Chair in Environmental Law
Hadfield, Gillian - BA, JD, PhD, Schwartz Reisman Chair in Technology and Society
Iacobucci, Edward - LLB, MPH, Toronto Stock Exchange Chair in Capital Markets
Katz, Ariel - LLB, LLM, SJD
Katz, Larissa - BA, LLB, LLM, SJD, CRC ***(Associate Dean, Graduate Program until December 31, 2024)***
Langille, Brian A. - LLB, BCL, BA
Lee, Ian - LLB, BCom, LLM
Lemmens, Trudo - LLM, DCL, Dr. William M. Scholl Chair in Health Law and Policy
Macintosh, Jeffrey - BSc, LLB, LLM
Macklin, Audrey - BSc, LLB, LLM
Moran, Mayo - BA, LLB, LLM, SJD
Moreau, Sophia - BA, BPhil, JD, PhD
Morgan, Edward - LLB, BA, LLM
Niblett, Anthony - BCom, PhD, CRC
Phillips, James - LLB, MA, PhD
Prado, Mariana - LLB, LLM, SJD, William C. Graham Chair in International Law and Development
Reaume, Denise - BA, LLB, BCL
Ripstein, Arthur S - BA, MA, LLM, PhD, Howard Beck, Q.C. Chair
Rittich, Kerry - BAMus, LLB, SJD
Roach, Kent - BA, LLB, LLM
Sarfaty, Galit - PhD
Schneiderman, David - BA, LLB, LLM
Shachar, Ayelet - LLB, BA, LLM, SJD
Shaffer, Martha - LLB, LLM, MAcct
Stacey, Richard - LLB, BA, SJD
Stern, Simon - BA, JD, PhD, Chair in Electronic Commerce
Stewart, Hamish - BA, LLB, MA, PhD
Su, Anna - LLM, JD, SJD
Thorburn, Malcolm - BA, JD, MA, LLM, SJD
Trebilcock, Michael - LLB, LLM
Valcke, Catherine - BCL, LLB, LLM, SJD
Valverde, Mariana - BA, MA, PhD, FRSC
Yoon, Albert - BA, LLB, MA, PhD, Chair in Law and Economics of Intellectual Property

Members Emeriti

Chapman, Bruce - BA, LLB, PhD
Dickens, Bernard - LLB, LLM, PhD
Duggan, Anthony - BA, LLB, LLM, LLD
Friedland, Martin - BCom, LLB, PhD
Macklem, Patrick - BA, LLB, LLM
Rogerson, Carol - BA, LLB, LLM, MA
Weinrib, Ernest - BA, LLB, PhD
Weinrib, Lorraine - BA, LLB, LLM

Associate Members

Hirschl, Ran - BA, LLB, MA, MPH, PhD, CRC
Sanderson, Douglas - BA, JD, LLM, J. Robert S. Prichard and Ann E. Wilson Chair in Law and Public Policy

Law: Law LLM

The **Master of Laws (LLM)** is a one-year degree program that provides students with an opportunity for more profound study beyond their first law degree.

The LLM program can be thesis-intensive (with both a short or long thesis option) or coursework-only. The short and long thesis options are for law students who have demonstrated a strong potential for advanced research and original scholarship. The coursework-only option is for law students who wish to specialize in a specific area of law or explore common law at an advanced level.

Within the LLM program, students also have the option of applying to pursue one of four areas of concentration:

- LLM with a Concentration in Business Law
- LLM with a Concentration in Criminal Law
- LLM with a Concentration in Health Law, Ethics, and Policy
- LLM with a Concentration in Legal Theory.

Students accepted into a concentration will receive a designation on their transcript. There are a limited number of spots available for students in each concentration, and acceptance into the concentrations will be competitive.

The program is completed on a full-time basis. Part-time registration may be considered in exceptional circumstances.

LLM Program (No Concentration): Thesis Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Law's additional admission requirements stated below.
- Applicants must have obtained a Bachelor of Laws or Juris Doctor degree, or the international equivalent of a law degree, from a recognized university. Applicants must have a minimum B+ average in the final year of their legal studies. Preference will be given to applicants who maintain this average throughout their legal studies, i.e., throughout their entire law degree.
- Applicants whose primary language is not English and who obtained their admitting degree (Bachelor of Laws, Juris Doctor, or equivalent) from a university where the language of instruction and examination was not English must show evidence of English proficiency by submitting English-language test scores. Several English-language testing services are acceptable. The Test of English as a Foreign Language (TOEFL) and International English Language Testing System (IELTS) are the most common tests:
  - The Test of English as a Foreign Language (TOEFL) with the following minimum scores:
    - Paper-based TOEFL: minimum overall score of 600, and 5 on the Test of Written English (TWE)
    - Internet-based TOEFL: minimum overall score of 100/120, and 24/30 on each section.
  - IELTS, Academic module: overall score of 7.5 with at least 7.0 in each component.
  - The University of Toronto Academic English preparation course: overall grade of A in Level 60.
  - Canadian Academic English Language (CAEL) Online: overall score of 70 with at least 70 in each component.
  - Cambridge English Qualifications: overall score of 191 with at least 185 on each section.
- No conditional offers of admission will be given based on successful completion of an English language test.

Completion Requirements

- Students must complete a **course of studies and a thesis** which, combined, are valued at 24 credit hours (equivalent to **6.0 full-course equivalents [FCEs]**).
- Students writing a short thesis must:
  - Complete 20 credit hours of coursework (equivalent to 5.0 FCEs); and
  - Write a thesis worth 4 credit hours (equivalent to 1.0 FCE), and approximately 45 pages or 13,000 words, under the supervision of a graduate faculty member.
- Students writing a long thesis must:
  - Complete 8 credit hours (equivalent to 2.0 FCEs) of coursework; and
  - Write a thesis worth 16 credit hours (equivalent to 4.0 FCEs), and approximately 175 pages or 52,000 words, under the supervision of a graduate faculty member.
- All thesis students must complete:
  - The mandatory graduate seminar for all LLM students who are writing a thesis: LAW1000H *Alternative Approaches to Legal Scholarship*; and
  - The mandatory graduate seminar for all LLM students: LAW7572H *LLM Seminar*.
- All coursework and the student's thesis are graded using the graduate grading scale as outlined in the University Assessment and Grading Practices Policy.
- The Faculty offers thesis students some flexibility regarding the number of credits allocated to their thesis. Students writing a short thesis can choose to write a slightly longer thesis for additional credit, and students writing a long thesis can choose to write a slightly shorter thesis for fewer credits. Students who wish to reduce or increase their thesis credits should contact the graduate program coordinator before the Fall add/drop deadline.
- The coursework requirements must be completed by the Faculty's Winter sessional deadline of the academic year of attendance; the thesis must be completed by July 31 of the academic year of attendance.
- With approval of the Associate Dean, Graduate Studies at the Faculty of Law, the program may be taken on a part-time basis over two years, in which case the coursework requirements must be completed by the Faculty's Winter sessional deadlines of the second academic year of attendance; the thesis must be completed by July 31 of the second academic year of attendance.
- **Residence.** Full-time students must be in attendance for at least two academic sessions (eight months, September to April). Part-time students must be in attendance for at least four academic sessions (September to April of both years of study).

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

LLM Program (No Concentration): Coursework-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Law's additional admission requirements stated below.
- Applicants must have obtained a Bachelor of Laws or Juris Doctor degree, or the international equivalent of a law degree, from a recognized university. Applicants must have a minimum B+ average in the final year of their legal studies. Preference will be given to applicants who maintain this average throughout their legal studies, i.e., throughout their entire law degree.

- Applicants whose primary language is not English and who obtained their admitting degree (Bachelor of Laws, Juris Doctor, or equivalent) from a university where the language of instruction and examination was not English must show evidence of English proficiency by submitting English-language test scores. Several English-language testing services are acceptable. The Test of English as a Foreign Language (TOEFL) and International English Language Testing System (IELTS) are the most common tests:
  - The Test of English as a Foreign Language (TOEFL) with the following minimum scores:
    - Paper-based TOEFL: minimum overall score of 600, and 5 on the Test of Written English (TWE)
    - Internet-based TOEFL: minimum overall score of 100/120, and 24/30 on each section.
  - IELTS, Academic module: overall score of 7.5 with at least 7.0 in each component.
  - The University of Toronto Academic English preparation course: overall grade of A in Level 60.
  - Canadian Academic English Language (CAEL) Online: overall score of 70 with at least 70 in each component.
  - Cambridge English Qualifications: overall score of 191 with at least 185 on each section.
- No conditional offers of admission will be given based on successful completion of an English language test.

Completion Requirements

- Students must complete a **course of studies** valued at 28 credit hours (equivalent to **7.0 full-course equivalents [FCEs]**).
  - **Writing requirement.** Students pursuing the coursework-only option must satisfy the writing requirement by July 31 by either:
    - Designating one course (3 or 4 credits) as a writing requirement course. Only courses requiring a written assignment of at least 5,000 words (approximately 20 pages) will qualify as a designated writing requirement course. LAW1000H *Alternative Approaches to Legal Scholarship* and LAW7572H *LLM Seminar* do not qualify as a designated writing requirement course.
      or
    - Completing the directed research project course (2 or 3 credits; LAW8002H or LAW8003H) requiring a written assignment of 7,000 or 10,500 words, respectively.
- All students in the LLM program must complete the mandatory graduate seminar: LAW7572H *LLM Seminar* (1 credit, or 0.25 FCE);
- All coursework is graded using the graduate grading scale as outlined in the University Assessment and Grading Practices Policy.
- The coursework requirements for all courses apart from the designated writing requirement course must be completed by the Faculty's Winter sessional deadlines of the academic year of attendance; the writing requirement must be fulfilled by July 31 of the academic year of attendance.
- With approval of the Associate Dean, Graduate Studies at the Faculty of Law, the program may be taken on a part-time basis over two years, in which case the coursework requirements must be completed by the Faculty's Winter sessional deadlines of the second academic year of attendance; the writing requirement must be completed by July 31 of the second academic year of attendance.
- Continuation in Year 2 of the part-time LLM program is subject to the Faculty of Law's determination that the student has made satisfactory progress in Year 1 of the part-time LLM.
- **Residence.** Full-time students must be in attendance for at least two academic sessions (eight months, September to April). Part-time students must be in attendance for at least four academic sessions (September to April of both years of study).

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

LLM Program (With a Concentration): Thesis Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Law's additional admission requirements stated below.
- Applicants must have obtained a Bachelor of Laws or Juris Doctor degree, or the international equivalent of a law degree, from a recognized university. Applicants must have a minimum B+ average in the final year of their legal studies. Preference will be given to applicants who maintain this average throughout their legal studies, i.e., throughout their entire law degree.
- Applicants whose primary language is not English and who obtained their admitting degree (Bachelor of Laws, Juris Doctor, or equivalent) from a university where the language of instruction and examination was not English must show evidence of English proficiency by submitting English-language test scores. Several English-language testing services are acceptable. The Test of English as a Foreign Language (TOEFL) and International English Language Testing System (IELTS) are the most common tests:
  - The Test of English as a Foreign Language (TOEFL) with the following minimum scores:
    - Paper-based TOEFL: minimum overall score of 600, and 5 on the Test of Written English (TWE)
    - Internet-based TOEFL: minimum overall score of 100/120, and 24/30 on each section.
  - IELTS, Academic module: overall score of 7.5 with at least 7.0 in each component.
  - The University of Toronto Academic English preparation course: overall grade of A in Level 60.
  - Canadian Academic English Language (CAEL) Online: overall score of 70 with at least 70 in each component.
  - Cambridge English Qualifications: overall score of 191 with at least 185 on each section.
- No conditional offers of admission will be given based on successful completion of an English language test.

- Applicants applying to one of the four areas of concentration must substantiate their interest in and suitability for the concentration in their statement of interest and research proposal. Applicants may only apply to one of the areas of concentration. Applicants may be admitted into the LLM program without a concentration.

Completion Requirements

- Students must complete a total of 24 credits (**6.0 full-course equivalents [FCEs]**) through a combination of **coursework and the thesis**. The thesis must be in the area of concentration into which the student was accepted.
- Students writing a short thesis and pursuing a concentration must:
  - Complete 20 credit hours of coursework (equivalent to 5.0 FCEs), at least 8 credits (equivalent to 2.0 FCEs) of which must be taken from a list of courses in the area of concentration, which will be provided annually on the program website. The remaining required credits can be satisfied with courses either within or outside the area of concentration.
  - Write a 4-credit hours thesis (equivalent to 1.0 FCE); that is, approximately 45 pages or 13,000 words in length, in the area of concentration under the supervision of a graduate faculty member.
- Students writing a long thesis and pursuing a concentration must:
  - Complete 8 credit hours of coursework (equivalent to 2.0 FCEs).
  - Write a thesis worth 16 credit hours (equivalent to 4.0 FCEs) and approximately 175 pages or 52,000 words in length, in the area of concentration under the supervision of a graduate faculty member.
- Students pursuing the concentration in Legal Theory must complete the mandatory 3-credit course LAW7081H *Foundations of Legal Theory* (3 credits, or 0.75 FCE). This course will count towards the credits required for the area of concentration.
- All thesis students must complete:
  - The mandatory graduate seminar for all LLM students writing a thesis: LAW1000H *Alternative Approaches to Legal Scholarship* (3 credits, or 0.75 FCE).
  - The mandatory graduate seminar for all LLM students: LAW7572H *LLM Seminar* (1 credit, or 0.25 FCE).
- All coursework and the student's thesis are graded using the graduate grading scale as outlined in the University Assessment and Grading Practices Policy.
- The Faculty offers thesis students some flexibility regarding the number of credits allocated to their thesis. Students writing a short thesis can choose to write a slightly longer thesis for additional credit, and students writing a long thesis can choose to write a slightly shorter thesis for fewer credits. Students who wish to reduce or increase their thesis credits should contact the graduate program coordinator before the Fall add/drop deadline.
- The coursework requirements must be completed by the Faculty's Winter sessional deadline of the academic year of attendance; the thesis must be completed by July 31 of the academic year of attendance.
- With approval of the Associate Dean, Graduate Studies at the Faculty of Law, the program may be taken on a part-time basis over two years, in which case the coursework requirements must be completed by the Faculty's Winter sessional deadlines of the second academic year of attendance; the thesis must be completed by July 31 of the second academic year of attendance.
- **Residence.** Full-time students must be in attendance for at least two academic sessions (eight months, September to April). Part-time students must be in attendance for at least four academic sessions (September to April of both years of study).

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

LLM Program (With a Concentration): Coursework-Only Option

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Law's additional admission requirements stated below.
- Applicants must have obtained a Bachelor of Laws or Juris Doctor degree, or the international equivalent of a law degree, from a recognized university. Applicants must have a minimum B+ average in the final year of their legal studies. Preference will be given to applicants who maintain this average throughout their legal studies, i.e., throughout their entire law degree.
- Applicants whose primary language is not English and who obtained their admitting degree (Bachelor of Laws, Juris Doctor, or equivalent) from a university where the language of instruction and examination was not English must show evidence of English proficiency by submitting English-language test scores. Several English-language testing services are acceptable. The Test of English as a Foreign Language (TOEFL) and International English Language Testing System (IELTS) are the most common tests:
  - The Test of English as a Foreign Language (TOEFL) with the following minimum scores:
    - Paper-based TOEFL: minimum overall score of 600, and 5 on the Test of Written English (TWE)
    - Internet-based TOEFL: minimum overall score of 100/120, and 24/30 on each section.
  - IELTS, Academic module: overall score of 7.5 with at least 7.0 in each component.
  - The University of Toronto Academic English preparation course: overall grade of A in Level 60.
  - Canadian Academic English Language (CAEL) Online: overall score of 70 with at least 70 in each component.
  - Cambridge English Qualifications: overall score of 191 with at least 185 on each section.

- No conditional offers of admission will be given based on successful completion of an English language test.
- Applicants applying to one of the four areas of concentration must substantiate their interest in and suitability for the concentration in their statement of interest. Applicants may only apply to one of the areas of concentration. Applicants may be admitted into the LLM program without a concentration.

Completion Requirements

- Students must complete a **course of studies** valued at 28 credit hours (equivalent to **7.0 full-course equivalents [FCEs]**).
  - **Writing requirement.** Students pursuing the coursework-only option must satisfy the writing requirement by July 31 by either:
    - Designating one course (3 or 4 credits) as a writing requirement course, which must be in the area of concentration. Only courses requiring a written assignment of at least 5,000 words (approximately 20 pages) will qualify as a designated writing requirement course. LAW1000H *Alternative Approaches to Legal Scholarship*, LAW7572H *LLM Seminar*, and LAW7077H *Introduction to the Canadian Legal System* do not qualify as a designated writing requirement course.
      or
    - Completing the directed research project course (2 or 3 credits; LAW8002H or LAW8003H) requiring a written assignment of 7,000 or 10,500 words, respectively.
- At least 12 of the credits (equivalent to 4.0 FCEs) must be completed from a list of courses in the area of concentration into which the student was accepted. A list of eligible courses will be provided annually on the program website.
- Students pursuing the concentration in Legal Theory must complete the mandatory 3-credit course, LAW7081H *Foundations of Legal Theory* (3 credits, or 0.75 FCE). This course will count towards the credits required for the area of concentration.
- All students in the LLM program must complete the mandatory graduate seminar: LAW7572H *LLM Seminar* (1 credit, or 0.25 FCE).
- All coursework is graded using the graduate grading scale as outlined in the University Assessment and Grading Practices Policy.
- The coursework requirements for all courses apart from the designated writing requirement course must be completed by the Faculty's Winter sessional deadlines of the academic year of attendance; the writing requirement must be fulfilled by July 31 of the academic year of attendance.
- With approval of the Associate Dean, Graduate Studies at the Faculty of Law, the program may be taken on a part-time basis over two years, in which case the coursework requirements must be completed by the Faculty's Winter sessional deadlines of the second academic year of attendance; the writing requirement must be completed by July 31 of the second academic year of attendance.
- Continuation in Year 2 of the part-time LLM program is subject to the Faculty of Law's determination that the student has made satisfactory progress in Year 1 of the part-time LLM studies.
- **Residence.** Full-time students must be in attendance for at least two academic sessions (eight months, September to April). Part-time students must be in attendance for at least four academic sessions (September to April of both years of study). Students must be in attendance for at least two academic sessions (eight months, September to April).

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Law: Law LLM (Dual Degree: LLB National University of Singapore / LLM)

Dual Degree Program: Bachelor of Laws (National University of Singapore) / Master of Laws (University of Toronto)

This dual degree program is offered as part of the Master of Laws (LLM)'s coursework-only option, with or without a concentration. Students are not eligible to take the thesis option.

Students complete three years of a Bachelor of Laws (LLB) from the National University of Singapore (NUS), and in Year 4 complete the LLM degree at the University of Toronto. Students complete the LLB and LLM degrees in four years rather than the five years it would take to attain them separately. See the LLM coursework requirements (with or without a concentration) above.

Upon successful completion of the degree requirements of both programs, students receive a Bachelor of Laws degree and a Master of Laws degree.

Contact

Bachelor of Laws Program
Faculty of Law, National University of Singapore
Email: lawUGadm@nus.edu.sg

Master of Laws Program
Faculty of Law, University of Toronto
Email: gradadmissions.law@utoronto.ca

Application Process

- Initial consideration for admission to the dual degree program will be based on the applicant's performance during the first three terms of the NUS LLB program.
- All offers of admission to the dual degree program will be conditional upon successful completion of all Year 1, 2, and 3 requirements of the LLB program before starting the LLM program.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Law's additional admission requirements stated below.
- Successful completion of the first three years of the NUS LLB program, with the equivalent of a B+ average. Preference will be given to those who maintain this average throughout their legal studies.
- Applicants applying to one of the four areas of concentration must substantiate their interest in and suitability for the particular area of concentration in their statement of interest. Applicants may only apply to one of the areas of concentration. Applicants may be admitted into the LLM program without a concentration.
- Residence. Students must be in attendance for at least two academic sessions (eight months, September to April).

Law: Law LLM (Dual Degree: LLB Torcuato Di Tella University / LLM)

Dual Degree Program: Bachelor of Laws (Torcuato Di Tella University) / Master of Laws (University of Toronto)

This dual degree program is offered as part of the Master of Laws (LLM)'s coursework-only option, with or without a concentration. Students are not eligible to take the thesis option.

Students complete nine sessions (four and a half years) of a Bachelor of Laws (LLB) from Torcuato Di Tella University (UTDT). In the Fall session of Year 5, students register in the University of Toronto LLM degree program and complete three sessions (September through August). Students complete the LLB and LLM degrees in five and a half years (11 sessions) rather than the six years it would take to attain them separately. See the LLM coursework requirements (with or without a concentration).

Upon successful completion of the degree requirements of both programs, students receive a Bachelor of Laws degree and a Master of Laws degree.

Contact

Bachelor of Laws Program
Faculty of Law, Torcuato Di Tella University
Email: alexm@utdt.edu

Master of Laws Program
Faculty of Law, University of Toronto
Email: gradadmissions.law@utoronto.ca

Application Process

- Initial consideration for admission to the dual degree program will be based on the applicant's performance during the first eight sessions of the UTDT LLB program.
- All offers of admission to the dual degree program will be conditional upon successful completion of all Year 1, 2, 3, and 4 requirements of the LLB program before starting the LLM program.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Law's additional admission requirements stated below.
- Successful completion of the first nine sessions (four and a half years) of the UTDT LLB program, with the equivalent of a B+ average. Preference will be given to those who maintain this average throughout their legal studies.
- Applicants applying to one of the four areas of concentration must substantiate their interest in and suitability for the area of concentration in their statement of interest. Applicants may only apply to one of the areas of concentration. Applicants may be admitted into the LLM program without a concentration.
- Residence. Students must be in attendance for at least two academic sessions (eight months, September to April).

Law: Law LLM (Dual Degree: LLB Tsinghua University / LLM)

Dual Degree Program: Bachelor of Laws (Tsinghua University) / Master of Laws (University of Toronto)

Admissions to this dual degree are suspended for the 2024-25 admissions cycle.
This dual degree program is offered as part of the Master of Laws (LLM)'s coursework-only option, with or without a concentration. Students are not eligible to take the thesis option.

Students complete two years of a Bachelor of Laws (LLB) from Tsinghua University, and in Year 3 complete the LLM degree at the University of Toronto.

Students complete the LLB and LLM degrees in four years rather than the five years it would take to attain them separately. See the LLM coursework requirements (with or without a concentration) above.

Upon successful completion of the degree requirements of both programs, students receive a Bachelor of Laws degree and a Master of Laws degree.

Contact

Bachelor of Laws Program
Law School, Tsinghua University
Email: to be confirmed

Master of Laws Program
Faculty of Law, University of Toronto
Email: gradadmissions.law@utoronto.ca

Law: Law LLM (Dual Degree: LLM / JM Tsinghua University)

Dual Degree Program: Master of Laws (University of Toronto) / Juris Master (Tsinghua University)

Admissions to this dual degree are suspended for the 2024-25 admissions cycle.

This dual degree program is offered as part of the Master of Laws (LLM)'s coursework-only option, with or without a concentration. Students are not eligible to take the thesis option.

Students complete the LLM and Juris Master (JM) degrees in three years and one session rather than the four years it would take to attain them separately. See the LLM coursework requirements (with or without a concentration) above.

- Years 1 and 2: students register in the Tsinghua University JM program.
- Fall session of Year 3: students register in the University of Toronto LLM program.
- Winter session of Year 3: students return to the Tsinghua University JM program.
- Fall session of Year 4: students register in the University of Toronto LLM program and complete the dual degree by the end of that session.

Upon successful completion of the degree requirements of both programs, students receive a Master of Laws degree and a Juris Master degree.

Contact

Juris Master Program
Law School, Tsinghua University
Email: to be confirmed

Master of Laws Program
Faculty of Law, University of Toronto
Email: gradadmissions.law@utoronto.ca

Law: Law LLM (Dual Degree: LLM / LLM (Tsinghua University)

Dual Degree Program: Master of Laws (University of Toronto) / Master of Laws (Tsinghua University)

Admissions to this dual degree are suspended for the 2024-25 admissions cycle.

This dual degree program is offered as part of the Master of Laws (LLM)'s coursework-only option, with or without a concentration. Students are not eligible to take the thesis option.

Students complete the two LLM degrees in two years and one session rather than the three years it would take to attain them separately. See the LLM coursework requirements (with or without a concentration) above.

- Year 1: students register in the Tsinghua University LLM program.
- Fall session of Year 2: students register in the University of Toronto LLM program.
- Winter session of Year 2: students return to the Tsinghua University LLM program.
- Fall session of Year 3: students register in the University of Toronto LLM program and complete the dual degree program by the end of that session.

Upon successful completion of the degree requirements of both programs, students receive the University of Toronto and Tsinghua University Master of Laws degree.

Contact

Master of Laws Program
Law School, Tsinghua University
Email: to be confirmed

Master of Laws Program
Faculty of Law, University of Toronto
Email: gradadmissions.law@utoronto.ca

Law: Law MSL

The **Master of Studies in Law (MSL)** program is designed for scholars with no prior training in law who wish to acquire a legal education and knowledge of law in order to add a legal dimension to scholarship in their own discipline.

Master of Studies in Law

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Law's additional admission requirements stated below.
- Applicants must have completed at least a master's degree, and preferably a doctorate, from a recognized university with a demonstrated high level of scholarship in a discipline related to law. Applicants must have a least a B+ average in their final year of study. Preference will be given to applicants who have maintained this average throughout their studies.
- Applicants whose primary language is not English and who obtained their admitting degree (Bachelor of Laws, Juris Doctor, or equivalent) from a university where the language of instruction and examination was not English must show evidence of English proficiency by submitting English-language test scores. Several

English-language testing services are acceptable. The Test of English as a Foreign Language (TOEFL) and International English Language Testing System (IELTS) are the most common tests:
    - The Test of English as a Foreign Language (TOEFL) with the following minimum scores:
        - Paper-based TOEFL: minimum overall score of 600, and 5 on the Test of Written English (TWE)
        - Internet-based TOEFL: minimum overall score of 100/120, and 24/30 on each section.
    - IELTS, Academic module: overall score of 7.5 with at least 7.0 in each component.
    - The University of Toronto Academic English preparation course: overall grade of A in Level 60.
    - Canadian Academic English Language (CAEL) Online: overall score of 70 with at least 70 in each component.
    - Cambridge English Qualifications: overall score of 191 with at least 185 on each section.
- No conditional offers of admission will be given based on successful completion of an English language test.

Completion Requirements

- MSL students must pursue a **course of studies** approved by the Faculty.
    - The course of studies will comprise at least 28 credit hours (7.0 full-course equivalents [FCEs]), and not more than 32 credit hours (equivalent to 8.0 FCEs), and will include at least three of the following subjects: contracts, torts, property, criminal law, constitutional law, and civil procedure.
    - Students must complete a research project of an interdisciplinary nature during their studies at the Faculty of Law. The project must be completed in the context of one of the courses that students are completing for credit.
    - A mandatory graduate seminar: LAW1000H *Alternative Approaches to Legal Scholarship*.
    - **In no circumstance will courses taken in the MSL program be accredited for the Juris Doctor (JD) program.**
- **Residence.** Full-time students must be in attendance for at least two academic sessions (eight months, September to April).

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

Law: Law SJD

The **Doctor of Juridical Science (SJD)** is a thesis degree program for outstanding law students seeking to pursue careers in teaching, policy, and research. Students receive a guaranteed funding package for three years. Inquiries should be directed to the Graduate Program Coordinator, Graduate Program, Faculty of Law at the address above.

Applicants may enter the SJD program via one of two routes: 1) following completion of an appropriate Bachelor of Laws or Juris Doctor degree and a Master of Laws; or 2) direct entry following completion of an appropriate Bachelor of Laws or Juris Doctor degree.

SJD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Law's additional admission requirements stated below.
- Applicants must have obtained a Bachelor of Laws or Juris Doctor degree and a Master of Laws, or the equivalent of each degree, from a recognized university. Applicants must have a minimum B+ average in their Master of Laws. Preference will be given to applicants who maintain this average throughout their legal studies.
- Applicants whose primary language is not English and who obtained their admitting degree (Bachelor of Laws, Juris Doctor, or equivalent) from a university where the language of instruction and examination was not English must show evidence of English proficiency by submitting English-language test scores. Several English-language testing services are acceptable. The Test of English as a Foreign Language (TOEFL) and International English Language Testing System (IELTS) are the most common tests:
    - The Test of English as a Foreign Language (TOEFL) with the following minimum scores:
        - Paper-based TOEFL: minimum overall score of 600, and 5 on the Test of Written English (TWE)
        - Internet-based TOEFL: minimum overall score of 100/120, and 24/30 on each section.
    - IELTS, Academic module: overall score of 7.5 with at least 7.0 in each component.
    - The University of Toronto Academic English preparation course: overall grade of A in Level 60.
    - Canadian Academic English Language (CAEL) Online: overall score of 70 with at least 70 in each component.
    - Cambridge English Qualifications: overall score of 191 with at least 185 on each section.
- No conditional offers of admission will be given based on successful completion of an English language test.

Completion Requirements

- **Coursework.** Students must complete the mandatory graduate seminar LAW1000H *Alternative Approaches to Legal Scholarship*.
    - Other coursework requirements are optional and shall be determined upon consultation with the supervisor. All coursework shall be subject to the approval of the Associate Dean, Graduate Studies, Law.
- **Area requirement.** Before being allowed to proceed with formal research on a thesis topic, a student must demonstrate competence in a broader area within which the topic falls. The student's supervisory committee (established by the student and approved by the Associate Dean of Graduate Studies at the Faculty of Law) assists in framing that area and compiling an appropriate plan for carrying out the research. The research undertaken by the student either culminates in a written exam, based on the reading list, or a research project, which is either a draft of a chapter of the thesis or an overview of the general argument. Both paths

lead to an oral exam based on the written work and the reading list (the "area exam"). Unless approved by the Associate Dean of Graduate of Graduate Studies, a student must satisfy the area requirement by the end of Year 1 of registration.
- **Research and writing.** A student will not be allowed to continue in the doctoral program, where, in the opinion of the Area Committee, the student is not capable of demonstrating the capacity for independent legal research and writing at an advanced level, including through the satisfaction of the area exam.
- **Year 2 presentation.** At the end of Year 2 of registration, students must present an abstract of their work in progress or a draft chapter to an audience of their peers and interested faculty. The purpose of the meeting is to provide the student with a forum to collect feedback from a broad audience.
- **Annual meetings.** Students must meet with their entire supervisory committee at least once a year.
- **Thesis.** Following completion of the requirements above, a thesis must be prepared which, in the opinion of the Faculty of Law, constitutes a distinct contribution to legal research or scholarship, and the student must pass a Doctoral Final Oral Examination based on the thesis.
  - The thesis must be completed within five years from the date of enrolment in the program.
  - No candidate will be recommended for the degree until the thesis has been approved by the Faculty of Law and is presented in publishable form, as described in the PhD regulations in this calendar.
- **Residence.** Students must be in full-time attendance for at least two academic sessions (eight months):
  - September to April for those starting the program in September; or
  - January to April and September to December for those starting the program in January.

Mode of Delivery: In person
Program Length: 3 years full-time (typical registration sequence: Continuous)
Time Limit: 5 years full-time

SJD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Law's additional admission requirements stated below.
- Applicants must have obtained a Bachelor of Laws or Juris Doctor degree, or the equivalent of a law degree, from a recognized university. A minimum A– average is required in the final year of their legal studies. Preference will be given to applicants who maintain this average throughout their legal studies, i.e., during the course of their entire law degree.
- The Associate Dean, Graduate Studies at the Faculty of Law has the discretion to permit direct entry into the SJD following completion of the Bachelor of Laws or Juris Doctor degree where the Graduate Admissions Committee is satisfied that the applicant demonstrates excellent potential for independent legal research and writing at an advanced level.
- Applicants whose primary language is not English and who obtained their admitting degree (Bachelor of Laws, Juris Doctor, or equivalent) from a university where the language of instruction and examination was not English must show evidence of English proficiency by submitting English-language test scores. Several English-language testing services are acceptable. The Test of English as a Foreign Language (TOEFL) and International English Language Testing System (IELTS) are the most common tests:
  - The Test of English as a Foreign Language (TOEFL) with the following minimum scores:
    - Paper-based TOEFL: minimum overall score of 600, and 5 on the Test of Written English (TWE)
    - Internet-based TOEFL: minimum overall score of 100/120, and 24/30 on each section.
  - IELTS, Academic module: overall score of 7.5 with at least 7.0 in each component.
  - The University of Toronto Academic English preparation course: overall grade of A in Level 60.
  - Canadian Academic English Language (CAEL) Online: overall score of 70 with at least 70 in each component.
  - Cambridge English Qualifications: overall score of 191 with at least 185 on each section.
- No conditional offers of admission will be given based on successful completion of an English language test.

Completion Requirements

- **Coursework.** Students must complete at least 8 credit hours (2.0 full-course equivalents [FCEs]) including the mandatory graduate seminar: LAW1000H *Alternative Approaches to Legal Scholarship*.
  - All coursework shall be subject to the approval of the Associate Dean, Graduate Studies at the Faculty of Law.
- **Area requirement.** Before being allowed to proceed with formal research on a thesis topic, a student must demonstrate competence in a broader area within which the topic falls. The student's supervisory committee (established by the student and approved by the Associate Dean of Graduate Studies at the Faculty of Law) assists in framing that area and compiling an appropriate plan for carrying out the research. The research undertaken by the student either culminates in a written exam, based on the reading list, or a research project, which is either a draft of a chapter of the thesis or an overview of the general argument. Both paths lead to an oral exam based on the written work and the reading list (the "area exam"). Unless approved by the Associate Dean of Graduate Studies, a student must satisfy the area requirement by the end of Year 1 of registration.
- **Research and writing.** A student will not be allowed to continue in the doctoral program, where, in the opinion of the Area Committee, the student is not capable of demonstrating the capacity for independent legal research and writing at an advanced level, including through the satisfaction of the area exam.
- **Year 2 presentation.** At the end of Year 2 of registration, students must present an abstract of their work in progress or a draft chapter to an audience of their peers and interested faculty. The purpose of the meeting is to provide the student with a forum to collect feedback from a broad audience.

- **Annual meetings.** Students must meet with their entire supervisory committee at least once a year.
- **Thesis.** Following completion of the area requirements, a thesis must be prepared which, in the opinion of the Faculty of Law, constitutes a distinct contribution to legal research or scholarship, and the student must pass a Doctoral Final Oral Examination based on the thesis.
  - The thesis must be completed within six years from the date of enrolment in the program.
  - No candidate will be recommended for the degree until the thesis has been approved by the Faculty of Law and is presented in publishable form, as described in the PhD regulations in this calendar.
- **Residence.** Students must be in full-time attendance for at least two academic sessions (eight months):
  - September to April for those starting the program in September; or
  - January to April and September to December for those starting the program in January.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

Law: Global Professional Law GPLLM

The **Global Professional Master of Laws (GPLLM)** program is an executive graduate degree in law designed for (1) executives who wish to become more conversant in the substance and methodology of law; and (2) internationally trained lawyers who wish to become licensed to practise law in Canada. Courses are offered on alternating weekends: Friday evenings and all-day Saturday.

The program may be completed in one year (three sessions with a F/W/S registration sequence) or through an extended full-time option that allows students to complete the program requirements over two years (six sessions with a F/W/S/F/W/S registration sequence).

The GPLLM offers the following concentrations:

- Business Law
- Canadian Law in a Global Context
- Innovation, Law and Technology

Law: Global Professional Law GPLLM; Concentration: Business Law

GPLLM; Concentration: Business Law (Full-Time Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Law's additional admission requirements stated below.
- Applicants must have completed a Juris Doctor (JD), Bachelor of Laws (LLB), or a bachelor's degree (in law or another discipline) from a recognized university, with a minimum mid-B average or equivalent in their final year of study.
- Applicants must demonstrate a minimum of five years of full-time work experience.
- Applicants whose primary language is not English and who obtained their admitting degree (bachelor's degree) from a university where the language of instruction and examination was not English must show evidence of English proficiency by submitting English-language test scores. Several English-language testing services are acceptable. The Test of English as a Foreign Language (TOEFL) and International English Language Testing System (IELTS) are the most common tests:
  - TOEFL with the following minimum scores:
    - Paper-based TOEFL: minimum overall score of 600, and 5 on the Test of Written English (TWE)
    - Internet-based TOEFL: minimum overall score of 100/120, and 24/30 on each section.
  - IELTS, Academic module: overall score of 7.5 with at least 7.0 in each component.
  - The Certificate of Proficiency in English (COPE): overall score of 86 with at least 22 in both the listening and reading components, 40 in the writing component, and 7 in the speaking component (Test of Oral Proficiency).
  - The University of Toronto Academic English preparation course: overall grade of A in Level 60.
  - Canadian Academic English Language (CAEL) Online: overall score of 70 with at least 70 in each component.
  - Cambridge English Qualifications: overall score of 191 with at least 185 on each section.
- No conditional offers of admission will be given based on successful completion of an English-language test.

Completion Requirements

- **Coursework: 30 credits (7.5 full-course equivalents [FCEs])**, as follows:
  - One required 3-credit course (equivalent to 0.75 FCE) as follows:
    - LAW4001H *Law and Business in a Global Economy*
  - 12 credits (equivalent to 3.0 FCEs) consisting of four courses within this concentration worth 3 credits each (0.75 FCE total) from this list:
    - LAW4002H *Comparative Corporate Governance*
    - LAW4003H *Securities Regulation and Corporate Finance*
    - LAW4004H *Mergers and Acquisitions*
    - LAW4005H *Canadian and Cross-Border Issues in Corporate Tax*
    - LAW4006H *International Dispute Resolution*
    - LAW4011H *Law and Policy of Public Private Partnerships*
    - LAW4012H *Intellectual Property Law*
    - LAW4013H *Economic and Social Regulation and Competition Law*
    - LAW4014H *International Insolvency Law*
    - LAW4015H *Organization of Transactional Legal Practice*

        - LAW4018H *Foundations of Legal Theory*
        - LAW4019H *Anti-Corruption Law: International, Domestic, and Practical Perspectives*
        - LAW4022H *Contract Law*
        - LAW4032H *Intellectual Property and Strategy*
        - LAW4036H *Applied Contract Law*
        - LAW4053H *Law and Regulation of Banks and Financial Institutions*
        - LAW4057H *Cannabis Law and Regulation*
        - LAW4058H *Competition Law*
        - LAW4059H *Digital Trade*
        - LAW4061H *Issues in Tax Law and Policy*
        - LAW4062H *Bankruptcy and Insolvency Law*
    - 15 credits (equivalent to 3.75 FCEs) consisting of five courses worth 3 credits each (0.75 FCE total) from any concentration. Not all courses will necessarily be available every year. The program reserves the discretion to decline student requests to complete certain electives based on course enrolment or otherwise.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

GPLLM; Concentration: Business Law (Extended Full-Time Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Law's additional admission requirements stated below.
- Applicants must have completed a Juris Doctor (JD), Bachelor of Laws (LLB), or a bachelor's degree (in law or another discipline) from a recognized university, with a minimum mid-B average or equivalent in their final year of study.
- Applicants must demonstrate a minimum of five years of full-time work experience.
- Applicants whose primary language is not English and who obtained their admitting degree (bachelor's degree) from a university where the language of instruction and examination was not English must show evidence of English proficiency by submitting English-language test scores. Several English-language testing services are acceptable. The Test of English as a Foreign Language (TOEFL) and International English Language Testing System (IELTS) are the most common tests:
    - TOEFL with the following minimum scores:
        - Paper-based TOEFL: minimum overall score of 600, and 5 on the Test of Written English (TWE)
        - Internet-based TOEFL: minimum overall score of 100/120, and 24/30 on each section.
    - IELTS, Academic module: overall score of 7.5 with at least 7.0 in each component.
    - The Certificate of Proficiency in English (COPE): overall score of 86 with at least 22 in both the listening and reading components, 40 in the writing component, and 7 in the speaking component (Test of Oral Proficiency).
    - The University of Toronto Academic English preparation course: overall grade of A in Level 60.
    - Canadian Academic English Language (CAEL) Online: overall score of 70 with at least 70 in each component.
    - Cambridge English Qualifications: overall score of 191 with at least 185 on each section.
- No conditional offers of admission will be given based on successful completion of an English-language test.

Completion Requirements

- **Coursework: 30 credits (7.5 full-course equivalents [FCEs])**, as follows:
    - One required 3-credit course (equivalent to 0.75 FCE) as follows:
        - LAW4001H *Law and Business in a Global Economy*
    - 12 credits (equivalent to 3.0 FCEs) consisting of four courses within this concentration worth 3 credits each (0.75 FCE total) from this list:
        - LAW4002H *Comparative Corporate Governance*
        - LAW4003H *Securities Regulation and Corporate Finance*
        - LAW4004H *Mergers and Acquisitions*
        - LAW4005H *Canadian and Cross-Border Issues in Corporate Tax*
        - LAW4006H *International Dispute Resolution*
        - LAW4011H *Law and Policy of Public Private Partnerships*
        - LAW4012H *Intellectual Property Law*
        - LAW4013H *Economic and Social Regulation and Competition Law*
        - LAW4014H *International Insolvency Law*
        - LAW4015H *Organization of Transactional Legal Practice*
        - LAW4018H *Foundations of Legal Theory*
        - LAW4019H *Anti-Corruption Law: International, Domestic, and Practical Perspectives*
        - LAW4022H *Contract Law*
        - LAW4032H *Intellectual Property and Strategy*
        - LAW4036H *Applied Contract Law*
        - LAW4053H *Law and Regulation of Banks and Financial Institutions*
        - LAW4057H *Cannabis Law and Regulation*
        - LAW4058H *Competition Law*
        - LAW4059H *Digital Trade*
        - LAW4061H *Issues in Tax Law and Policy*
        - LAW4062H *Bankruptcy and Insolvency Law*
    - 15 credits (equivalent to 3.75 FCEs) consisting of five courses worth 3 credits each (0.75 FCE total) from any concentration. Not all courses will necessarily be available every year. The program reserves the discretion to decline student requests to complete certain electives based on course enrolment or otherwise.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Law: Global Professional Law GPLLM; Concentration: Canadian Law in a Global Context

GPLLM; Concentration: Canadian Law in a Global Context (Full-Time Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Law's additional admission requirements stated below.
- Applicants must have completed a bachelor's degree (in law or another discipline) from a recognized university, with a minimum mid-B average or equivalent in their final year of study
- Applicants must demonstrate at least five years of full-time work experience. However, applicants without five years of full-time work experience may be eligible for admission. If admitted, they will only be eligible to enrol in courses within the Canadian Law in a Global Context concentration.
- Applicants whose primary language is not English and who obtained their admitting degree (bachelor's degree) from a university where the language of instruction and examination was not English must show evidence of English proficiency by submitting English-language test scores. Several English-language testing services are acceptable. The Test of English as a Foreign Language (TOEFL) and International English Language Testing System (IELTS) are the most common tests:
  - TOEFL with the following minimum scores:
    - Paper-based TOEFL: overall minimum score of 600, and 5 on the Test of Written English (TWE)
    - Internet-based TOEFL: overall minimum score of 100/120, and 24/30 on each section.
  - IELTS, Academic module: overall score of 7.5 with at least 7.0 in each component.
  - The Certificate of Proficiency in English (COPE): overall score of 86 with at least 22 in both the listening and reading components, 40 in the writing component, and 7 in the speaking component (Test of Oral Proficiency).
  - The University of Toronto Academic English preparation course: overall grade of A in Level 60.
  - Canadian Academic English Language (CAEL) Online: overall score of 70 with at least 70 in each component.
  - Cambridge English Qualifications: overall score of 191 with at least 185 on each section.
- No conditional offers of admission will be given based on successful completion of an English-language test.

Completion Requirements

- **Coursework: 30 credits (7.5 full-course equivalents [FCEs])**, as follows:
  - One required 3-credit course (equivalent to 0.75 FCE) as follows:
    - LAW4010H *Foundations of Canadian Law*
  - 12 credits (equivalent to 3.0 FCEs) consisting of four seminar courses within this concentration worth 3 credits each (0.75 FCE total) from this list:
    - LAW4007H *Canadian Administrative Law*
    - LAW4008H *Canadian Constitutional Law*
    - LAW4009H *Canadian Criminal Law*
    - LAW4017H *Professional Responsibility*
    - LAW4020H *Property Law*
    - LAW4021H *Tort Law*
    - LAW4022H *Contract Law*
    - LAW4023H *Business Organizations*
    - LAW4024H *Applied Legal Research and Writing*
    - LAW4051H *Evidence Law*
    - LAW4060H *Advanced Criminal Law: Financial Crimes in a Global Context*
    - LAW4064H *Negotiation* (Credit/No Credit)
    - LAW4065H *The Emergence of LegalTech*
    - LAW4066H *Trial Advocacy* (Credit/No Credit)
    - LAW4067H *Employment Law*
  - 15 credits (3.75 FCEs) consisting of five courses worth 3 credits each (0.75 FCE) from any concentration. Not all elective courses will necessarily be available every year. The program reserves the discretion to decline student requests to complete certain electives based on course enrolment or otherwise.

Note: Canadian Law in a Global Context students without the minimum five years of full-time work experience may only select electives from within their concentration.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

GPLLM; Concentration: Canadian Law in a Global Context (Extended Full-Time Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Law's additional admission requirements stated below.
- Applicants must have completed a bachelor's degree (in law or another discipline) from a recognized university, with a minimum mid-B average or equivalent in their final year of study
- Applicants must demonstrate at least five years of full-time work experience. However, applicants without five years of full-time work experience may be eligible for admission. If admitted, they will only be eligible to enrol in courses within the Canadian Law in a Global Context concentration.
- Applicants whose primary language is not English and who obtained their admitting degree (bachelor's degree) from a university where the language of instruction and examination was not English must show evidence of English proficiency by submitting English-language test scores. Several English-language testing

services are acceptable. The Test of English as a Foreign Language (TOEFL) and International English Language Testing System (IELTS) are the most common tests:
    - TOEFL with the following minimum scores:
        - Paper-based TOEFL: overall minimum score of 600, and 5 on the Test of Written English (TWE)
        - Internet-based TOEFL: overall minimum score of 100/120, and 24/30 on each section.
    - IELTS, Academic module: overall score of 7.5 with at least 7.0 in each component.
    - The Certificate of Proficiency in English (COPE): overall score of 86 with at least 22 in both the listening and reading components, 40 in the writing component, and 7 in the speaking component (Test of Oral Proficiency).
    - The University of Toronto Academic English preparation course: overall grade of A in Level 60.
    - Canadian Academic English Language (CAEL) Online: overall score of 70 with at least 70 in each component.
    - Cambridge English Qualifications: overall score of 191 with at least 185 on each section.
- No conditional offers of admission will be given based on successful completion of an English-language test.

Completion Requirements

- **Coursework: 30 credits (7.5 full-course equivalents [FCEs])**, as follows:
    - One required 3-credit course (equivalent to 0.75 FCE) as follows:
        - LAW4010H *Foundations of Canadian Law*
    - 12 credits (equivalent to 3.0 FCEs) consisting of four seminar courses within this concentration worth 3 credits each (0.75 FCE total) from this list:
        - LAW4007H *Canadian Administrative Law*
        - LAW4008H *Canadian Constitutional Law*
        - LAW4009H *Canadian Criminal Law*
        - LAW4017H *Professional Responsibility*
        - LAW4020H *Property Law*
        - LAW4021H *Tort Law*
        - LAW4022H *Contract Law*
        - LAW4023H *Business Organizations*
        - LAW4024H *Applied Legal Research and Writing*
        - LAW4051H *Evidence Law*
        - LAW4060H *Advanced Criminal Law: Financial Crimes in a Global Context*
        - LAW4064H *Negotiation* (Credit/No Credit)
        - LAW4065H *The Emergence of LegalTech*
        - LAW4066H *Trial Advocacy* (Credit/No Credit)
        - LAW4067H *Employment Law*
    - 15 credits (3.75 FCEs) consisting of five courses worth 3 credits each (0.75 FCE) from any concentration. Not all elective courses will necessarily be available every year. The program reserves the discretion to decline student requests to complete certain electives based on course enrolment or otherwise.

Note: Canadian Law in a Global Context students without the minimum five years of full-time work experience may only select electives from within their concentration.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Law: Global Professional Law GPLLM; Concentration: Innovation, Law and Technology

GPLLM; Concentration: Innovation, Law and Technology (Full-Time Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Law's additional admission requirements stated below.
- Applicants must have completed a bachelor's degree (in law or another discipline) from a recognized university, with a minimum mid-B average or equivalent in their final year of study.
- Applicants must demonstrate a minimum of five years of full-time work experience.
- Applicants should demonstrate an interest in technology and entrepreneurship in their application materials.
- Applicants whose primary language is not English and who obtained their admitting degree (bachelor's degree) from a university where the language of instruction and examination was not English must show evidence of English proficiency by submitting English-language test scores. Several English-language testing services are acceptable. The Test of English as a Foreign Language (TOEFL) and International English Language Testing System (IELTS) are the most common tests:
    - TOEFL with the following minimum scores:
        - Paper-based TOEFL: minimum overall score of 600, and 5 on the Test of Written English (TWE)
        - Internet-based TOEFL: minimum overall score of 100/120, and 24/30 on each section.
    - IELTS, Academic module: overall score of 7.5 with at least 7.0 in each component.
    - The Certificate of Proficiency in English (COPE): overall score of 86 with at least 22 in both the listening and reading components, 40 in the writing component, and 7 in the speaking component (Test of Oral Proficiency).
    - The University of Toronto Academic English preparation course: overall grade of A in Level 60.
    - Canadian Academic English Language (CAEL) Online: overall score of 70 with at least 70 in each component.
    - Cambridge English Qualifications: overall score of 191 with at least 185 on each section.
- No conditional offers of admission will be given based on successful completion of an English-language test.

Completion Requirements

- **Coursework: 30 credits (7.5 full-course equivalents [FCEs])**, as follows:
  - One required 3-credit course (equivalent to 0.75 FCE) as follows:
    - LAW4026H *Introduction to Law and Technology*
  - 12 credits (equivalent to 3.0 FCEs) consisting of four courses within this concentration worth 3 credits each (0.75 FCE total) from this list:
    - LAW4012H *Intellectual Property Law*
    - LAW4027H *Legal Technology and Informatics*
    - LAW4028H *Blockchain, Digital Assets, and the Law*
    - LAW4030H *Financing Technological Innovation*
    - LAW4031H *Cybersecurity and Data Protection in a Global Information Economy*
    - LAW4032H *Intellectual Property and Strategy*
    - LAW4033H *Design Thinking*
    - LAW4034H *Launching Technology Ventures*
    - LAW4035H *The Internet of Things*
    - LAW4036H *Applied Contract Law*
    - LAW4046H *Privacy and Data Governance*
    - LAW4047H *The Legal Challenges of Digital Environments*
    - LAW4052H *Law of Software Development and Commercialization*
    - LAW4055H *Disruptive Innovations and Legal Infrastructure*
    - LAW4063H *Regulation of Artificial Intelligence: A Legal and Practical Study*
  - 15 credits (equivalent to 3.75 FCEs) consisting of five courses worth 3 credits each (0.75 FCE total) from any concentration. Not all elective courses will necessarily be available every year. The program reserves the discretion to decline student requests to complete certain electives based on course enrolment or otherwise.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

GPLLM; Concentration: Innovation, Law and Technology (Extended Full-Time Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Law's additional admission requirements stated below.
- Applicants must have completed a bachelor's degree (in law or another discipline) from a recognized university, with a minimum mid-B average or equivalent in their final year of study.
- Applicants must demonstrate a minimum of five years of full-time work experience.
- Applicants should demonstrate an interest in technology and entrepreneurship in their application materials.
- Applicants whose primary language is not English and who obtained their admitting degree (bachelor's degree) from a university where the language of instruction and examination was not English must show evidence of English proficiency by submitting English-language test scores. Several English-language testing services are acceptable. The Test of English as a Foreign Language (TOEFL) and International English Language Testing System (IELTS) are the most common tests:
  - TOEFL with the following minimum scores:
    - Paper-based TOEFL: minimum overall score of 600, and 5 on the Test of Written English (TWE)
    - Internet-based TOEFL: minimum overall score of 100/120, and 24/30 on each section.
  - IELTS, Academic module: overall score of 7.5 with at least 7.0 in each component.
  - The Certificate of Proficiency in English (COPE): overall score of 86 with at least 22 in both the listening and reading components, 40 in the writing component, and 7 in the speaking component (Test of Oral Proficiency).
  - The University of Toronto Academic English preparation course: overall grade of A in Level 60.
  - Canadian Academic English Language (CAEL) Online: overall score of 70 with at least 70 in each component.
  - Cambridge English Qualifications: overall score of 191 with at least 185 on each section.
- No conditional offers of admission will be given based on successful completion of an English-language test.

Completion Requirements

- **Coursework: 30 credits (7.5 full-course equivalents [FCEs])**, as follows:
  - One required 3-credit course (equivalent to 0.75 FCE) as follows:
    - LAW4026H *Introduction to Law and Technology*
  - 12 credits (equivalent to 3.0 FCEs) consisting of four courses within this concentration worth 3 credits each (0.75 FCE total) from this list:
    - LAW4012H *Intellectual Property Law*
    - LAW4027H *Legal Technology and Informatics*
    - LAW4028H *Blockchain, Digital Assets, and the Law*
    - LAW4030H *Financing Technological Innovation*
    - LAW4031H *Cybersecurity and Data Protection in a Global Information Economy*
    - LAW4032H *Intellectual Property and Strategy*
    - LAW4033H *Design Thinking*
    - LAW4034H *Launching Technology Ventures*
    - LAW4035H *The Internet of Things*
    - LAW4036H *Applied Contract Law*
    - LAW4046H *Privacy and Data Governance*
    - LAW4047H *The Legal Challenges of Digital Environments*
    - LAW4052H *Law of Software Development and Commercialization*
    - LAW4055H *Disruptive Innovations and Legal Infrastructure*
    - LAW4063H *Regulation of Artificial Intelligence: A Legal and Practical Study*

- 15 credits (equivalent to 3.75 FCEs) consisting of five courses worth 3 credits each (0.75 FCE total) from any concentration. Not all elective courses will necessarily be available every year. The program reserves the discretion to decline student requests to complete certain electives based on course enrolment or otherwise.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Law: Global Professional Law GPLLM Courses

All courses are offered in modules, each worth 0.75 full-course equivalent (FCE). A module will be approximately four months in length. Courses will be offered during the evening and on the weekend. A large portion of the learning for the modules will take place outside of class through carefully designed reading, assignments, projects, and group study.

Course Code	Course Title
LAW4001H	Law and Business in a Global Economy
LAW4002H	Comparative Corporate Governance
LAW4003H	Securities Regulation and Corporate Finance
LAW4004H	Mergers and Acquisitions
LAW4005H	Canadian and Cross-Border Issues in Corporate Tax
LAW4006H	International Dispute Resolution
LAW4007H	Canadian Administrative Law
LAW4008H	Canadian Constitutional Law
LAW4009H	Canadian Criminal Law
LAW4010H	Foundations of Canadian Law
LAW4011H	Law and Policy of Public Private Partnerships
LAW4012H	Intellectual Property Law
LAW4013H	Economic and Social Regulation and Competition Law
LAW4014H	International Insolvency Law
LAW4015H	Organization of Transactional Legal Practice
LAW4016H	Corporate Social Responsibility, Ethics, and the Law
LAW4017H	Professional Responsibility
LAW4018H	Foundations of Legal Theory
LAW4019H	Anti-Corruption Law: International, Domestic, and Practical Perspectives
LAW4020H	Property Law
LAW4021H	Tort Law
LAW4022H	Contract Law
LAW4023H	Business Organizations
LAW4024H	Applied Legal Research and Writing
LAW4026H	Introduction to Law and Technology
LAW4027H	Legal Technology and Informatics
LAW4028H	Blockchain, Digital Assets, and the Law
LAW4030H	Financing Technological Innovation
LAW4031H	Cybersecurity and Data Protection in a Global Information Economy
LAW4032H	Intellectual Property and Strategy
LAW4033H	Design Thinking
LAW4034H	Launching Technology Ventures
LAW4035H	The Internet of Things
LAW4036H	Applied Contract Law
LAW4037H	Procedural Fairness in Decision Making
LAW4038H	Dispute Resolution and Negotiations
LAW4039H	Law of the Workplace
LAW4040H	Harassment, Discrimination, and the Duty to Accommodate
LAW4041H	Health Law
LAW4042H	Procurement Law
LAW4043H	Privacy and Expression in the Digital Age
LAW4044H	Education Law
LAW4045H	Executive Compensation
LAW4046H	Privacy and Data Governance
LAW4047H	The Legal Challenges of Digital Environments
LAW4049H	Privacy and Freedom of Information
LAW4050H	Perspectives on Leadership and the Law
LAW4051H	Evidence Law
LAW4052H	Law of Software Development and Commercialization
LAW4053H	Law and Regulation of Banks and Financial Institutions
LAW4054H	Management and Resolution of Legal Disputes
LAW4055H	Disruptive Innovations and Legal Infrastructure
LAW4056H	Crisis Management and Leadership

Course Code	Course Title
LAW4057H	Cannabis Law and Regulation
LAW4058H	Competition Law
LAW4059H	Digital Trade
LAW4060H	Advanced Criminal Law: Financial Crimes in a Global Context
LAW4061H	Issues in Tax Law and Policy
LAW4062H	Bankruptcy and Insolvency Law
LAW4063H	Regulation of Artificial Intelligence: A Legal and Practical Study
LAW4064H	Negotiation (Credit/No Credit)
LAW4065H	The Emergence of LegalTech
LAW4066H	Trial Advocacy (Credit/No Credit)
LAW4067H	Employment Law
LAW4068H	Regulating the Digital Economy
LAW4069H	Electrification and the Energy Transition: Law and Policy
LAW4070H	Ethics of Emerging Technology

Law: Law LLM, MSL, SJD Courses

Course Code	Course Title
LAW1000H	Alternative Approaches to Legal Scholarship
LAW2001H	Advanced Contracts: The Law of Contractual Interpretation
LAW2003H	Advanced Labour Law: Bargaining Rights and Following Rights in a Global Economy
LAW2005H	The Art of the Deal
LAW2007H	Bankruptcy Law
LAW2007Y	Bankruptcy and Insolvency Law
LAW2008H	Business Organizations
LAW2009Y	Canadian Income Tax Law
LAW2011H	Climate Change Law
LAW2013H	Competition Law and Intellectual Property
LAW2014H	Competition Policy
LAW2015H	Contested Corporate Transactions
LAW2017Y	Corporate Income Tax
LAW2019H	Corporations, Individuals, and the State
LAW2021H	Economic and Social Regulation
LAW2022H	Entertainment Law
LAW2023H	Environmental Law
LAW2024Y	Evidence
LAW2027H	From Blueprints to Buildings: Legal Issues in the Construction Industry
LAW2035H	International Commercial and Investor-State Arbitration
LAW2037H	International Taxation
LAW2038H	International Trade Regulation
LAW2039H	Investment and Growth in Emerging Markets
LAW2040Y	Labour and Employment Law
LAW2046H	Negotiation
LAW2047H	Patent and Trade Secrets Law
LAW2048H	New Directions in Energy Regulation
LAW2051H	Real Estate Law
LAW2053Y	Secured Transactions
LAW2059H	Venture Capital Financing
LAW2060H	Workshop: Innovation Law and Policy
LAW2062H	Applied Corporate Law
LAW2064H	Fundamental Themes in Securities Litigation Practice
LAW2066H	Law of International Business and Finance Transactions
LAW2070Y	Copyright, Trademark, and Patent
LAW2072H	Data and Governance
LAW2075H	Intensive Course: Consumer Contracts in the Information Society: A Comparative Overview
LAW2076H	Securities Litigation: The Public and Private Enforcement of Securities Law
LAW2086H	Intensive Course: AI and Digital Transformation for Law and Business
LAW2087H	Advanced Secured Transactions Seminar
LAW2088H	Beyond the Standard Labour Law Model — Construction, Film, the Gig Economy, and Beyond
LAW2089H	Commercial Litigation: Process and Strategy
LAW2090H	Transnational Business and Human Rights
LAW3003H	Advanced Constitutional Law: Comparative Remedial and Security Issues
LAW3005H	Advanced Criminal Procedure and Charter Issues
LAW3008H	Comparative Criminal Law

Course Code	Course Title
LAW3013Y	Criminal Procedure
LAW3017H	Financial Crimes
LAW3025H	Sentencing and Penal Policy
LAW3027H	Wrongful Convictions
LAW3028H	Youth Criminal Justice
LAW3029H	Crime and Punishment: Mandatory Minimums, the Death Penalty, and Other Current Debates
LAW3030H	Introduction to International Criminal Law
LAW3031H	Perspectives on Crime and Law
LAW3034H	Homelessness
LAW3035H	Intensive Course: Punishing Genocide: An Introduction to International Criminal Law
LAW3037H	Intensive Course: Laws of Violence: Crime, War, Policing, Punishment
LAW3038H	Introduction to International Criminal Law
LAW3039H	The Criminal Process
LAW4001H	Law and Business in a Global Economy
LAW4002H	Comparative Corporate Governance
LAW4003H	Securities Regulation and Corporate Finance
LAW4004H	Mergers and Acquisitions
LAW4005H	Canadian and Cross-Border Issues in Corporate Tax
LAW4007H	Canadian Administrative Law
LAW4008H	Canadian Constitutional Law
LAW4009H	Canadian Criminal Law
LAW4010H	Foundations of Canadian Law
LAW4011H	Law and Policy of Public Private Partnerships
LAW4012H	Intellectual Property Law
LAW4013H	Economic and Social Regulation and Competition Law
LAW4014H	International Insolvency Law
LAW4015H	Organization of Transactional Legal Practice
LAW4016H	Corporate Social Responsibility, Ethics, and the Law
LAW4017H	Professional Responsibility
LAW4018H	Foundations of Legal Theory
LAW4019H	Anti-Corruption Law: International, Domestic, and Practical Perspectives
LAW5003H	Authorship and Copyright: Theory and History
LAW5004H	Civil Law

Course Code	Course Title
LAW5005H	Comparative Constitutional Law and Politics
LAW5008H	Crime and Punishment
LAW5020H	Trademark Theory
LAW5024H	Judgement in Law and Politics
LAW5025H	Kant's Philosophy of Law
LAW5026H	Democracy, Politics, and the Law
LAW5027H	Law and Literature
LAW5030H	Legal Archaeology: Studies in Cases in Context
LAW5037H	Religion and the Liberal State: The Case of Islam
LAW5043H	Theory of Contract Law
LAW5044H	Theory of Private Law: Selected Topics and Texts
LAW5045H	Workshop: Faculty Colloquium
LAW5047H	Law and Economics Workshop Seminar
LAW5048H	From Patriarchy to Equal Citizenship
LAW5049H	History and Theory of International Law
LAW5051H	Workshop: Legal History Seminar
LAW5057H	John Rawls' Theory of Justice: An Introduction
LAW5058H	Law, Religion, and Democracy
LAW5059H	Philosophical Approaches to Equality and Discrimination
LAW5060H	Sanctity of Contracts in a Secular Age
LAW5075H	Hegel's Legal Philosophy
LAW5076H	Intensive Course: Law, Literature, Liberalism, and Beyond
LAW5077H	Intensive Course: The Rule and the Exception
LAW5078H	The Politics of Legal Space
LAW5079H	Persons and Bodies
LAW5080H	Access to Justice and the Legal Process
LAW5081H	Intensive Course: Accountability for Wrongdoing
LAW5450H	Intellectual Property, Technology Licensing, and Cybersecurity in the Innovative Economy
LAW6001H	Contemporary Issues in Health Law and Policy
LAW6003Y	Health Law and Bioethics
LAW6006H	Public Health Law
LAW6013H	Law and Policy of Biotechnology
LAW6019H	Privacy Law

Course Code	Course Title
LAW6021H	Gender Equality in Transnational Legal Perspective
LAW6023H	International Human Rights Law
LAW6025H	Law and Policy of Public Private Partnerships
LAW6026H	Law, Institutions, and Development
LAW6029Y	International Human Rights Clinic
LAW6030H	Law of Mental Health
LAW6042H	Human Rights and Their Critics
LAW6045H	Intensive Course: Pandemics and the Law
LAW7000Y	Securities Regulation
LAW7002H	Civil Procedure
LAW7003Y	Administrative Law
LAW7006H	Advanced Torts
LAW7007H	Tax Law and Policy Workshop
LAW7008H	Private International Law
LAW7012H	Community Planning
LAW7013H	International Environmental Law
LAW7018Y	Family Law
LAW7019H	Finance and Accounting in Business Law
LAW7020H	Introduction to Animal Law
LAW7021H	Sports Law
LAW7027H	Introduction to the Legal System of the People's Republic of China
LAW7030H	Issues in Aboriginal Law and Policy
LAW7033H	Perspectives on Civil Litigation, Procedure, and Professionalism
LAW7036H	Foreign Affairs and the Canadian Constitution
LAW7038H	Advanced Family Law: Resolving Family Law Case
LAW7040H	Constitutional Law of the U.S.
LAW7046H	Freedom of Expression and Press
LAW7049H	Legal Ethics
LAW7051H	Media and Defamation Law
LAW7052Y	Aboriginal Peoples and Canadian Law
LAW7053H	Intensive Course: Who Belongs? Dilemmas of Citizenship and Immigration
LAW7054H	Copyright Law
LAW7058H	Canadian Legal Methods and Writing
LAW7062Y	Constitutional Litigation
LAW7063H	Statutes and Statutory Interpretation
LAW7064H	Adhesion Contracts: The Perils of Clicking "I Agree"
LAW7066H	Canadian Migration Law
LAW7070H	Economic Analysis of Law
LAW7071H	Youth and the Law
LAW7073H	Student Scholarship Workshop
LAW7076H	Refugee Law
LAW7081H	Foundations of Legal Theory
LAW7085H	Capstone Course: the Role of the Judge
LAW7086H	Refugee Rights
LAW7094Y	Public International Law
LAW7095H	Indigenous Law in Context: Intensive
LAW7103H	Appeals: Principles and Practice
LAW7104H	Indigenous Legal Traditions and the Imperial Response
LAW7105H	Indigenous People and Canadian Courts: Advocacy, Evidentiary, and Ethical Issues
LAW7109H	Intensive Course: Comparative Constitutional Law of Free Expression
LAW7110H	Intensive Course: Constitutional Design in Post Conflict Democracies
LAW7111H	Intensive Course: Feminisms and Pornography, c 1975-1995
LAW7114H	The Legal Profession in Popular Culture
LAW7115H	Intensive Course: snuw'yulh: Indigenous Legal Traditions in the Coast Salish World
LAW7116H	Intensive Course: The Rabbinic Idea of Law
LAW7120H	Intensive Course: Anishinaabe Law in Toronto: Understanding Constitutionalism in Context
LAW7135H	Intensive Course: The Law as a Conversation Among Equals
LAW7136H	Intensive Course: Law and Visual Culture
LAW7137H	Intensive Course: Kayanerenkó:wa, the Haudenosaunee Law of Peace
LAW7138H	Intensive Course: Lawyering for Social Change
LAW7155H	Advanced Property
LAW7156H	Arbitration and Alternative Dispute Resolution
LAW7157H	Intensive Course: Artificial Intelligence Law and Policy
LAW7158H	Intensive Course: Constitutionalism After AI

Course Code	Course Title
LAW7159H	Intensive Course: Indigenous Laws and Jurisdiction Over Children and Families
LAW7160H	Intensive Course: Lawyering for Social Change
LAW7161H	Intensive Course: Reproductive Rights and Justice
LAW7162H	Restitution
LAW7163H	Intensive Course: Revisiting the Distinction Between Fact and Law: Colonial Legislation, Judicial Interpretation, and Indigenous Nations
LAW7164H	Intensive Course: Transnational Labour Law
LAW7165H	Introduction to Cybersecurity Law
LAW7166H	New Technologies and International Law
LAW7167H	The Administrative State in Practice
LAW7168H	Intensive Course: Digitization of Money and Finance: A Systemic Perspective
LAW7169H	China's Judicial System from the Perspective of Judicial Politics
LAW7170H	Broadcasting and the Internet
LAW7171H	Intensive Course: Current Challenges to Human Rights Law
LAW7172H	Intensive Course: Indigenous Peoples and Comparative Constitutional and International Law: New Zealand, Canada, and the USA
LAW7173H	Intensive Course: Interpreting the Charter: The Role of Courts, the Legislature, and the Executive
LAW7174H	Intensive Course: Judging in a Democracy
LAW7175H	Intensive Course: Lawyers, Empires, and Social Change
LAW7176H	Intensive Course: Problems in Creativity, Innovation, and Free Speech Law
LAW7177H	Intensive Course: The Charter's Future in Troubled Times
LAW7178H	Intensive Course: The Color Line and the Law: Reading W.E.B. Du Bois's The Souls of Black Folk
LAW7179H	Intensive Course: Theories of International Legal Order
LAW7180H	Intensive Course: Uses and Abuses of the U.S. Bankruptcy Code
LAW7181H	Israel/Palestine and the Law
LAW7182H	Legal Archaeology: Studies in Cases in Context
LAW7183H	Linguistic Diversity and the Law
LAW7184H	New Technologies and International Law
LAW7185H	Tax Practice Seminar
LAW7186H	Intensive Course: A Brief Introduction to Water Law
LAW7572H	LLM Seminar
LAW8000Y	Thesis
LAW8001H	Directed Research Program (Graduate Students Only)
CHL5704H	International Human Rights Law and Global Health: The Right to Health in Theory and Practice
HAD5775H	Competition, Cooperation, and Strategy in Health Care
HAD6762H	Organization and Management Studies Comprehensive Course
JDM3619H	Digital Media Distribution

Leadership, Higher and Adult Education

LHAE: Introduction

Faculty Affiliation

Ontario Institute for Studies in Education (OISE)

Degree Programs

Adult Education and Community Development

MA, MEd, and PhD

Educational Leadership and Policy

MA, MEd, EdD, and PhD

- Fields:
  - Educational Leadership and Policy;
  - International Educational Leadership and Policy (EdD only)
  - School Leadership in Diverse Contexts (MEd only)

Higher Education

MA

- Field:
  - Higher Education

MEd

- Fields:
  - Education in the Professions;
  - Higher Education;
  - Higher Education Leadership;
  - Student Development and Student Services in Higher Education

EdD

- Field:
  - Higher Education

PhD

- Field:
  - Higher Education

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Aging, Palliative and Supportive Care Across the Life Course**
  - Adult Education and Community Development, MA, MEd, PhD
- **Community Development** (admissions have been administratively suspended)
  - Adult Education and Community Development, MA, MEd
- **Comparative, International and Development Education**
  - Adult Education and Community Development, MA, MEd, PhD
  - Educational Leadership and Policy, MA, MEd, EdD, PhD
  - Higher Education, MA, MEd, EdD, PhD
- **Educational Policy** (admissions have been administratively suspended)
  - Adult Education and Community Development, MA, MEd, PhD
  - Educational Leadership and Policy, MA, MEd, EdD, PhD
  - Higher Education, MA, MEd, EdD, PhD
- **Engineering Education**
  - Higher Education, MA, MEd, PhD
- **Environmental Studies**
  - Adult Education and Community Development, MA, MEd, PhD
- **Environment and Health**
  - Adult Education and Community Development, MA, MEd, PhD
- **Ethnic, Immigration and Pluralism Studies**
  - Educational Leadership and Policy, MA, MEd, EdD, PhD
- **Sexual Diversity Studies**
  - Adult Education and Community Development, MA, MEd, PhD
  - Educational Leadership and Policy, MA, MEd, EdD, PhD
  - Higher Education, MA, MEd, EdD, PhD
- **Women and Gender Studies**
  - Adult Education and Community Development, MA, MEd, PhD
  - Educational Leadership and Policy, MA, MEd, EdD, PhD
  - Higher Education, MA, MEd, EdD, PhD
- **Workplace Learning and Social Change**
  - Adult Education and Community Development, MA, MEd, PhD

Overview

Scholars in the Department of Leadership, Higher and Adult Education (LHAE) are engaged in a range of theoretical and practical areas: primary, secondary, and higher education leadership and administration; adult education; policy and change; social diversity; and community engagement.

LHAE develops and organizes collaborative specializations in support of particular research areas of interest including those in policy, international development education, and workplace learning. These collaborative specializations can be taken in conjunction with most OISE graduate programs.

Contact and Address

Admissions

Initial inquiries regarding admission to graduate studies in the Department of Leadership, Higher and Adult Education should be made directly to:
Web: www.oise.utoronto.ca/registrar-students
Email: admissions.oise@utoronto.ca
Tel: (416) 978-4300
Fax: (416) 323-9964

Registrar's Office and Student Experience
Ontario Institute for Studies in Education (OISE)
University of Toronto
252 Bloor Street West, Rm. 8-225
Toronto, Ontario M5S 1V6 Canada

Programs

Web: www.oise.utoronto.ca/lhae
Email: lhae.admissions@utoronto.ca
Tel: (Admissions and Programs): (416) 978-0729

Department of Leadership, Higher and Adult Education
Ontario Institute for Studies in Education
University of Toronto
252 Bloor Street West, 6th and 7th Floors
Toronto, Ontario M5S 1V6 Canada

LHAE: Graduate Faculty

Full Members

Bakan, Abigail - BA, MA, PhD
Bascia, Nina - PhD
Bisaillon, Laura - BA, MA, PhD
Boler, Megan - BA, PhD
Buckner, Elizabeth - BA, MA, PhD
Campbell, Carol - BA, PhD
Childs, Ruth - BS, MA, PhD
Chmielewski, Anna Katyn - BA, MA, PhD
Davies, Scott - BA, MA, PhD
Dhuey, Elizabeth Ann - BA, MEc, PhD
Diaz Rios, Claudia Milena - BA, MA, PhD
Flessa, Joseph - BA, MA, PhD
Georgis, Dina - PhD
Hayhoe, Ruth - BA, MA, PhD
Hildyard, Angela - BSc, MA, PhD
Janzen, Katharine - BS, BN, MEd, EdD
Jones, Glen - BA, BEd, MEd, PhD
Kuk, Hye-Su - BA, MA, PhD
Lavigne, Eric - BE, MEd, PhD
Lopez, Ann - BA, BE, MEd, PhD
Magnusson, Jamie-Lynn - BA, MA, PhD
McCready, Lance - BA, MA, PhD
Menashy, Francine - BA, BEd, MEd, PhD
Mirchandani, Kiran - BA, MPH, PhD
Mojab, Shahrzad - BA, MEd, EdD
Mundy, Karen - BA, MA, PhD
Sá, Creso - BA, MA, DPhil
Sawchuk, Peter - BSc, BEd, MA, PhD
Slotta, James - BS, MPsy, PhD
Vieta, Marcelo A. - BA, MA, PhD
Waterman, Stephanie - BA, MA, PhD
Wheelahan, Leesa - BA, MA, PhD
Zuker, Marvin - BA, LLB, MEd

Members Emeriti

Gaskell, Jane - BA, EdD
Joshee, Reva - BLitt, MA, PhD
Lang, Daniel - BA, MAT, PhD
Miles, Angela - BA, MA, PhD
Muzzin, Linda - BA, MA, MPsy, PhD
Ryan, James - BEd, MEd, PhD

Associate Members

Acton, Karen - BSc, MSc, DPhil
Blaauw-Hara, Mark - BA, MA, PhD
Bowen, Tracey - BFA, MEd, PhD
Drinkwater, Mary - BA, BEd, MPA, PhD
Entigar, Katherine - BA, MA, PhD
Evans-Tokaryk, Tyler - PhD
Gingras, Jacqui - PhD
Knight, Jane - PhD
Manion, Caroline - BA, MA, PhD
Moodie, Gavin - PhD
Mosher, Janet - LLB
Pan, Julia - BA, MEd, PhD
Parzen, Maurine - BNSc, MS, PhD
Pinto, Laura Elizabeth - BEd, BCom, MEd, PhD
Rawle, Fiona - PhD
Restoule, Jean-Paul - BA, MA, DPhil
Scully-Stewart, Coleen - BA, MEd, PhD
Sharratt, Lyn - BA, MEd, EdD
Stickel, Micah - BASc, MASc, PhD
Sumner, Jennifer - BA, PhD
Williams, Andrea - MA, PhD

LHAE: Adult Education and Community Development MA

The MA is a research-based thesis degree program which can be taken on a full-time or part-time basis. The MA program focuses on learning that happens individually and collectively among adults in communities, workplaces, social movements, the street, and the virtual world — any place where people come together to create social change. The program serves individuals seeking to develop skills for education, community, and organizational roles in a wide range of settings in public, private, and voluntary sectors. Graduates work with newcomers, youth, women's groups, LGBTQ agencies, organized labour, racialized people, and disenfranchised communities in positions that involve community engagement and education, policy development, leadership, mentorship, and organizational

development. The department welcomes applicants with diverse but relevant backgrounds.

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

Master of Arts

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Leadership, Higher and Adult Education's additional admission requirements stated below.
- An appropriate bachelor's degree in a relevant discipline or professional program from a recognized university, with a grade equivalent to a University of Toronto mid-B or better in the final year.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **4.0 full-course equivalents (FCEs)** as follows:
  - Either LHA1100H *Introduction to Adult Education* or LHA1102H *Introduction to Community Development*, to be taken at the beginning of the program.
  - LHA1183H *Master's Thesis Seminar*.
  - At least one research methods course (0.5 FCE).
  - At least 2.0 FCEs must be from the Adult Education and Community Development program. Additional courses may be required of some students.
- A **thesis** based on original research, which may lay the groundwork for doctoral research.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 10 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

LHAE: Adult Education and Community Development MEd

The MEd is a non-thesis, course-based professional degree program which can be taken on a full-time or part-time basis. The MEd program focuses on learning that happens individually and collectively among adults in communities, workplaces, social movements, the street, and the virtual world — any place where people come together to create social change. It serves individuals seeking to develop skills for education, community, and organizational development roles in a wide range of settings in public, private, and voluntary sectors. Graduates work with newcomers, youth, women's groups, LGBTQ agencies, organized labour, racialized people, and disenfranchised communities in positions that involve community engagement and education, policy development, leadership, mentorship, and organizational development. The department welcomes applicants with diverse but relevant backgrounds.

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

Master of Education

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Leadership, Higher and Adult Education's additional admission requirements stated below.
- An appropriate bachelor's degree in a relevant discipline or professional program from a recognized university, with a grade equivalent to a University of Toronto mid-B or better in the final year.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **5.0 full-course equivalents (FCEs)** as follows:
  - Either LHA1100H *Introduction to Adult Education* or LHA1102H *Introduction to Community Development*, to be taken at the beginning of the program.
  - At least 2.5 FCEs must be from the Adult Education and Community Development program.
  - One research methods course is recommended (0.5 FCE).

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F); 10 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

LHAE: Adult Education and Community Development PhD

The PhD is a research-based thesis degree program which can be taken on a full-time or flexible-time basis. Designed to provide opportunities for advanced study in the theoretical foundations of adult education and community development and in the application of such knowledge to practice, the PhD focuses on learning that happens individually and collectively among adults in communities, workplaces, social movements, the street, and the virtual world — any place where people come together to create social change.

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

Except for the time to completion, requirements for both the full-time and flexible-time programs are the same. The department welcomes applicants with diverse but relevant backgrounds.

Applicants to the flexible-time option should be active professionals who demonstrate connections between their professional work and their proposed course program, and/or between their professional work and their proposed research. Capacity to secure blocks of time to enable concentrated study is required.

PhD Program (Full-Time Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Leadership, Higher and Adult Education's additional admission requirements stated below.
- An appropriate master's degree from a recognized university in a relevant discipline or professional program, with a minimum standing equivalent to a University of Toronto B+.
- In addition to responses to the Faculty questions in the online admissions application, a sample of written work is required, which will help the admissions committee to assess an applicant's readiness to succeed in rigorous coursework and to conduct systematic research for the PhD. Applicants typically submit a master's-level Major Research Paper or thesis as their sample of written work. Applicants who do not have a Major Research Paper or thesis must provide a sample of written work that showcases their ability to write clearly and analytically about issues related to adult education and community development. The admissions committee will look for evidence that applicants understand how to craft an academic document, define a research problem, devise an appropriate focus for an inquiry, assemble and analyze evidence and/or academic literatures, and develop conclusions in a rigorous manner. Examples include a master's-level course paper or professional publication.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **3.0 full-course equivalents (FCEs)** as follows:
  - LHA3102H *Doctoral Thesis Seminar*, recommended to be taken in the first session of the program.
  - At least 1.5 FCEs must be from the Adult Education and Community Development program. Students with little background in the area of Adult Education and Community Development may be required to complete an additional 0.5 FCE providing such background.
  - At least one research methods course (0.5 FCE).
- **Comprehensive requirement.** Normally, a major paper between 7,000 and 12,000 words in length (including tables, figures, and references), which consists of a comprehensive discussion of one or more literatures and/or debates of significance to Adult Education and Community Development.
- **Thesis.**
- Students must register continuously and pay the full-time fee until all degree requirements have been fulfilled.
- Students cannot transfer between the full-time and flexible-time PhD options.
- Students cannot transfer between the EdD and PhD programs.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Flexible-Time Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Leadership, Higher and Adult Education's additional admission requirements stated below.
- An appropriate master's degree from a recognized university in a relevant discipline or professional program, with a minimum standing equivalent to a University of Toronto B+.
- In addition to responses to the Faculty questions in the online admissions application, a sample of written work is required, which will help the admissions committee to assess an applicant's readiness to succeed in rigorous coursework and to conduct systematic research for the PhD. Applicants typically submit a master's-level Major Research Paper or thesis as their sample of written work. Applicants who do not have a Major Research Paper or thesis must provide a sample of written work that showcases their ability to write clearly and analytically about issues related to adult education and community development. The admissions committee will look for evidence that applicants understand how to craft an academic document, define a research problem, devise an appropriate focus for an inquiry, assemble and analyze evidence and/or academic literatures, and develop conclusions in a rigorous manner. Examples include a master’s-level course paper or professional publication.
- Applicants must demonstrate that they are active professionals engaged in activities related to their proposed program of study.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **3.0 full-course equivalents (FCEs)** as follows:
  - LHA3102H *Doctoral Thesis Seminar*, recommended to be taken in the first session of the program.
  - At least 1.5 FCEs must be from the Adult Education and Community Development program. Students with little background in the area of Adult Education and Community Development may be required to complete an additional 0.5 FCE providing such background.
  - At least one research methods course (0.5 FCE).

- **Comprehensive requirement.** Normally, a major paper between 7,000 and 12,000 words in length (including tables, figures, and references), which consists of a comprehensive discussion of one or more literatures and/or debates of significance to Adult Education and Community Development.
- **Thesis.**
- Students must register continuously until all degree requirements have been fulfilled. They register full-time during the first four years and may continue as part-time students thereafter, with their department's approval.
- Students cannot transfer between the full-time and flexible-time PhD options.
- Students cannot transfer between the EdD and PhD programs.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

LHAE: Educational Leadership and Policy MA

The **Master of Arts (MA) program** in Educational Leadership and Policy is a thesis-based program that best serves students who are committed to scholarship and research on policy, leadership, change, and social diversity in elementary and secondary schools and other educational settings for children and youth. A combination of theory and real-world practice will enable students to tackle the complex challenges of current education policy, leadership, and reform. Program strengths include:

- A focus on equity, anti-oppression, and educational justice;
- Deep expertise in both the Ontario educational context and in comparative, international, and global contexts; and
- Training in advanced qualitative and quantitative research methods.

The MA program is designed to develop critical and highly skilled researchers, educational leaders, and policy analysts who will advance knowledge in the field and make positive change in schools, school boards (districts), government ministries, foundations, nongovernmental agencies, and international organizations in Canada and around the world.

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

The MA is available through both full-time and part-time studies. The department welcomes applicants with diverse but relevant backgrounds and experiences.

Master of Arts

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Leadership, Higher and Adult Education's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university in a relevant discipline or professional program, with a grade equivalent to a University of Toronto B+ or better in the final year.
- Two letters of reference: one academic, the other either academic or professional.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **4.0 full-course equivalents (FCEs)** as follows:
  - LHA1003H *Designing Master's Research Proposals*.
  - LHA1004H *Research Literacy in Educational Leadership and Policy*.
  - LHA1040H *Introduction to Educational Leadership and Policy: Policy, Leadership, Change, and Diversity*.
  - 0.5 FCE in research methods, to be selected in consultation with the thesis supervisor.
  - 2.0 elective FCEs, of which 0.5 must be from the Educational Leadership and Policy program, normally at the 1000 level or 5000 special topics level. Educational Leadership and Policy program course codes typically have a "0" in the second digit, for example "LHA10XX" and "LHA50XX." The following courses also count as Educational Leadership and Policy program courses: EDP3045H, EDP3145H, JOI3043H, JOI3048H, and JOI3049H. Additional courses may be required of some students.
- **Thesis**, to be developed under the guidance of a faculty member.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 10 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

LHAE: Educational Leadership and Policy MEd

The **Master of Education (MEd) program** in Educational Leadership and Policy is designed for aspiring or current education professionals who are interested in developing their practice in policy, leadership, change, and social diversity in elementary and secondary schools and other educational settings for children and youth. A combination of theory and real-world practice will enable students to tackle the complex challenges of current education policy, leadership and reform. Program strengths include:

- A focus on equity, anti-oppression, and educational justice;
- Deep expertise in both the Ontario educational context and in comparative, international, and global contexts; and
- An emphasis on cutting-edge, research-informed practice.

The MEd program is designed to develop critical and highly skilled educational leaders, and policy analysts, and public servants who make positive change in schools, school boards (districts), government ministries, foundations, nongovernmental agencies, and international organizations in Canada and around the world.

The MEd degree can be pursued on a part-time or full-time basis. The department welcomes applicants with diverse but relevant backgrounds and experiences. Students may take the MEd without a field or through the field in School Leadership in Diverse Contexts.

There are two MEd options available:

1. **Coursework Only Option** and
2. **Coursework Plus Major Research Paper Option.**

Students initially apply to and register in the Coursework Only Option. For registration in the Coursework Plus Major Research Paper Option, department permission is required. The field in School Leadership in Diverse Contexts is online and course-based. Please see the description of the field below for more information.

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

The Coursework Only Option is available in two* delivery models:

1. Regular MEd stream: students are accepted every year and can register on a full-time or part-time basis.
2. Online/Hybrid (part-time) cohort-based stream: ***Admissions to this option have been administratively suspended, effective September 2024.** The option will close in August 2027. **Students interested in an online MEd program should apply to the Educational Leadership and Policy MEd; Field: School Leadership in Diverse Contexts.**

MEd Program (Coursework Only Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Leadership, Higher and Adult Education's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university in a relevant discipline with a grade equivalent to a University of Toronto mid-B or better in the final year.
- Two letters of reference: one academic, the other either academic or professional.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **5.0 full-course equivalents (FCEs)** as follows:
  - LHA1004H *Research Literacy in Educational Leadership and Policy*, to be taken at the beginning of the program.
  - LHA1040H *Introduction to Educational Leadership and Policy: Policy, Leadership, Change, and Diversity*, to be taken at the beginning of the program.
  - 4.0 other FCEs, of which at least 2.0 FCEs must be from the Educational Leadership and Policy program, normally at the 1000 level or 5000 special topics level. Educational Leadership and Policy program course codes typically have a "0" in the second digit, for example "LHA10XX" and "LHA50XX." The following courses also count as Educational Leadership and Policy program courses: EDP3045H, EDP3145H, JOI3043H, JOI3048H, and JOI3049H. Students may choose to focus on one of the four research areas: Policy, Leadership, Change, or Social Diversity.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F); 10 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MEd Program (Coursework Only Option [Online/Hybrid Delivery, Part-Time Only])

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Leadership, Higher and Adult Education's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university in a relevant discipline with a grade equivalent to a University of Toronto mid-B or better in the final year.
- Two letters of reference. Whenever possible, one should be written by an educational professional for whom the applicant has worked. The second should be by a referee who can attest to the applicant's academic ability.
- Applicants must have the equivalent of 12 months of successful, relevant, professional experience.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **5.0 full-course equivalents (FCEs)** as follows:
  - LHA1004H *Research Literacy in Educational Leadership and Policy*, to be taken at the beginning of the program.

- LHA1040H *Introduction to Educational Leadership and Policy: Policy, Leadership, Change, and Diversity*, to be taken at the beginning of the program.
- 4.0 other FCEs, of which at least 2.0 FCEs must be from the Educational Leadership and Policy program, normally at the 1000 level or 5000 special topics level. Educational Leadership and Policy program course codes typically have a "0" in the second digit, for example "LHA10XX" and "LHA50XX." The following courses also count as Educational Leadership and Policy program courses: EDP3045H, EDP3145H, JOI3043H, JOI3048H, and JOI3049H. Students may choose to focus on one of the four research areas: Policy, Leadership, Change, or Social Diversity.

Mode of Delivery: Online, Hybrid
Program Length: 10 sessions part-time
Time Limit: 6 years part-time

MEd Program (Coursework Plus Major Research Paper Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Leadership, Higher and Adult Education's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university in a relevant discipline with a grade equivalent to a University of Toronto mid-B or better in the final year.
- Two letters of reference: one academic, the other either academic or professional.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **4.0 full-course equivalents (FCEs)** as follows:
  - LHA1003H *Designing Master's Research Proposals*. Part-time students are recommended to take this course towards the end of their program; full-time students are recommended to take it in Year 1.
  - LHA1040H *Introduction to Educational Leadership and Policy: Policy, Leadership, Change, and Diversity*, to be taken at the beginning of the program.
  - 3.0 other FCEs, of which at least 1.5 FCEs must be from the Educational Leadership and Policy program, normally at the 1000 level or 5000 special topics level. Educational Leadership and Policy program course codes typically have a "0" in the second digit, for example "LHA10XX" and "LHA50XX." The following courses also count as Educational Leadership and Policy program courses: EDP3045H, EDP3145H, JOI3043H, JOI3048H, and JOI3049H. Students may choose to focus on one of the four program strands: Policy, Leadership, Change, or Social Diversity. LHA1004H *Research Literacy in Educational Leadership and Policy* is strongly recommended, as is an appropriate research methods (RM) course selected in consultation with the Faculty MRP supervisor.
- **Major Research Paper (MRP)**: LHA2001Y *Major Research Paper* to be carried out under the guidance of a faculty member.

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW); 10 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

LHAE: Educational Leadership and Policy MEd; Field: School Leadership in Diverse Contexts (Effective Fall 2025)

The field in School Leadership in Diverse Contexts within the MEd program in Educational Leadership and Policy is an online, course-based professional master's field designed for aspiring or current educational leaders working in elementary or secondary schools or other educational settings for children and youth. This field will engage educational professionals in opportunities to critically analyze and understand the practices and issues involved in the administration and leadership of schools with diverse student populations.

All required courses in the School Leadership in Diverse Contexts field are offered online. This field is offered part-time only.

MEd Program; Field: School Leadership in Diverse Contexts

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Leadership, Higher and Adult Education's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university in a relevant discipline with a grade equivalent to a University of Toronto mid-B or better in the final year.
- Two letters of reference. Whenever possible, one should be written by an educational professional for whom the applicant has worked. The second should be by a referee who can attest to the applicant's academic ability.
- Applicants must have the equivalent of 12 months of successful, relevant, professional experience.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **5.0 full-course equivalents (FCEs)** as follows:
  - LHA1004H *Research Literacy in Educational Leadership and Policy*, to be taken at the beginning of the program.

- LHA1040H *Introduction to Educational Leadership and Policy: Policy, Leadership, Change, and Diversity*, to be taken at the beginning of the program.
- LHA1042H *Educational Leadership and Diversity*.
- 3.5 other FCEs, of which at least 1.5 FCEs must be from the Educational Leadership and Policy program, normally at the 1000 level or 5000 special topics level. Educational Leadership and Policy program course codes typically have a "0" in the second digit, for example "LHA10XX" and "LHA50XX." The following courses also count as Educational Leadership and Policy program courses: EDP3045H, EDP3145H, JOI3043H, JOI3048H, and JOI3049H. Students are encouraged to focus in the areas of Leadership and Social Diversity; and may also choose to explore courses in the areas of Policy and Change.

Mode of Delivery: Online, Hybrid
Program Length: 10 sessions part-time
Time Limit: 6 years part-time

LHAE: Educational Leadership and Policy EdD

The Doctor of Education (EdD) in Educational Leadership and Policy is designed for working professional educators who are interested in developing their skills as research-informed scholar-practitioners in policy, leadership, change, and social diversity in elementary and secondary schools and other educational settings for children and youth. The EdD culminates in a dissertation in practice involving the application of theory and research to a problem of practice. Program strengths include:

- A focus on equity, anti-oppression, and educational justice;
- Deep expertise both in the Ontario educational context and in comparative, international, and global contexts; and
- Training in advanced qualitative and quantitative research methods.

The EdD program is designed to develop critical and highly skilled educational leaders, policy analysts, and public servants who will make positive change in schools, school boards (districts), government ministries, foundations, nongovernmental agencies, and international organizations in Canada and around the world.

The EdD degree is offered full-time in a cohort format specifically designed for working professional educators. The department welcomes applicants with diverse but relevant backgrounds and experiences.

Delivery options — although not all elective and research methods courses are offered in each modality, students may be able to complete the EdD degree program through one of two delivery modes:

- In-person: students will mainly complete their coursework and other program requirements in-person, with up to one-third of their coursework online; and
- Hybrid: students will experience a mix of modes of engagement, with some of their coursework and other program requirements in-person and between one-third and two-thirds of their coursework online, depending on their choice of elective and research methods courses, or an (optional) collaborative specialization.

The next intake for this program will be Fall 2025. Applications for the EdD in Educational Leadership and Policy for the 2025-26 admissions cycle are set to open early October 2024.

Doctor of Education

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Leadership, Higher and Adult Education's additional admission requirements stated below.
- Master's degree in the area of Educational Leadership and Policy or an equivalent degree with high academic standing from a recognized university.
- In addition to responses to the Faculty questions in the online admissions application, a supplementary writing sample is required, which will help the admissions committee to assess an applicant's readiness to succeed in rigorous coursework and to conduct systematic research for the EdD. Applicants typically submit a master's-level Major Research Paper or thesis as their writing sample. Applicants who do not have a Major Research Paper or thesis must provide a writing sample that showcases their ability to write clearly and analytically about educational issues. Examples include a master's-level course paper, a policy document, and a professional publication.
- The applicant must be in a leadership position in education, or must have held a leadership position, or must demonstrate potential for leadership.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **4.0 core full-course equivalents (FCEs)** as follows:
  - LHA3003H *Designing Research Proposals in Educational Leadership and Policy*.
  - LHA3007H *Reviewing the Literature*.
  - LHA3009H *Professional Development Seminar for the EdD*.
  - LHA3040H *People and Power in Organizations*.
  - 1.0 FCE in research methods, to be chosen in consultation with the faculty advisor.
  - 1.0 elective FCE.
- **Comprehensive examination.** Successful oral defence of a written paper that critically reviews and synthesizes the literature related to the problem of practice to be addressed in the student's dissertation in practice, selected by the student in consultation with the supervisor/advisor. The comprehensive exam is normally taken at the end of Year 2, and must be taken no later than the end of Year 3. Students will be informed of their status (pass or fail) at the end of the oral exam. Students who are not successful in their first attempt will be permitted one additional attempt to pass.

- **Thesis (dissertation in practice) proposal hearing.**
- **Thesis (dissertation in practice)**: The thesis (dissertation in practice) is the culminating component of the Doctor of Education degree in Educational Leadership and Policy that shall include an identification and investigation of a problem of practice, the application of theory and research to the problem of practice, and a design for action to address the problem of practice. Specifically, the thesis (dissertation in practice) consists of original research in the form of a written proposal or plan for innovative and impactful educational policy, guideline, advocacy, development project, or activism within or beyond a traditional educational setting, aimed at improving practice at local, regional, national, or international levels.
- Students are full-time and must maintain continuous registration full-time and pay full-time fees until all degree requirements, including the thesis (dissertation in practice), are completed.
- Students cannot transfer between the EdD and PhD programs.

Mode of Delivery: In person, Hybrid
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

LHAE: Educational Leadership and Policy EdD; Field: International Educational Leadership and Policy

Within the Educational Leadership and Policy EdD program, the **field in International Education Leadership and Policy** offers a robust, world-class program of study structured for professionals working within international settings in positions of leadership and policymaking who want to create impact in their field and mobilize new solutions to real-world problems.

The EdD program is offered full-time in a cohort format and will be delivered in a hybrid modality with short on-campus Institutes. The majority of courses will be offered online. The department welcomes applicants with diverse but relevant backgrounds.

EdD Program; Field: International Educational Leadership and Policy

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Leadership, Higher and Adult Education's additional admission requirements stated below.
- Master's degree in the area of Educational Leadership and Policy or an equivalent degree with high academic standing from a recognized university.
- Responses to the Faculty questions in the online admissions application: applicants will demonstrate experience and interest in studying international issues in education policy and leadership. In addition, a supplementary writing sample is required, which will help the admissions committee to assess an applicant's readiness to succeed in rigorous coursework and to conduct systematic research for the EdD. Applicants typically submit a master's-level Major Research Paper or thesis as their writing sample. Applicants who do not have a Major Research Paper or thesis must provide a writing sample that showcases their ability to write clearly and analytically about educational issues. Examples include a master's-level course paper, a policy document, and a professional publication.
- The applicant must be in a leadership position in education in an international setting, or must have held a leadership position, or must demonstrate the relevance of the program to their position or professional development in international education policy.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **4.0 core full-course equivalents (FCEs)** as follows:
  - LHA3003H *Designing Research Proposals in Educational Leadership and Policy*
  - LHA3005H *Introduction to Research Methods for the EdD (RM)*
  - LHA3006H *Data Analysis for the Education Doctorate-RM*
  - LHA3007H *Reviewing the Literature*
  - LHA3040H *People and Power in Organizations*
  - LHA3041H *Doctoral Seminar on Policy Issues in Education*
  - 0.5 elective FCE chosen from 1000, 3000, or 6000-level courses as available online **or**
    - individual reading course (LHA3052H *Individual Reading and Research in Educational Leadership and Policy*) **or**
    - practicum course (CIE1002H *Practicum for Comparative, International, and Development Education*)
  - LHA3008H *Professional Seminar and Dissertation Workshop in International Educational Leadership and Policy*
  - Courses will be offered in specialized sections for the International Educational Leadership and Policy field cohort with course syllabi adapted to reflect the international educational policy focus.
  - Attendance in an on-campus Institute will be required to allow face-to-face delivery of one course in each of Years 1, 2, and 3. The Institute will foster cohort engagement and exchange; orientation to the OISE professors, the University of Toronto, and the program.
  - All other courses will be offered online using synchronous and asynchronous modalities.
- **Comprehensive examination.** Successful oral (using video conferencing) defence of a written paper that critically reviews and synthesizes the literature related to the problem of practice to be addressed in the student's dissertation in practice, selected by the student in consultation with the supervisor/advisor. The comprehensive exam is normally taken at the end of Year 2, and must be taken no later than the end of Year 3. Students will be informed of their status (pass or fail) at the end of the oral exam. Students who are not

successful in their first attempt will be permitted one additional attempt to pass.
- **Thesis (dissertation in practice) proposal hearing.**
- **Thesis (dissertation in practice):** The thesis (dissertation in practice) is the culminating component of the Doctor of Education degree in International Educational Leadership and Policy that shall include an identification and investigation of a problem of practice, the application of theory and research to the problem of practice, and a design for action to address the problem of practice. Specifically, the thesis (dissertation in practice) consists of original research in the form of a written proposal or plan for innovative and impactful educational policy, guideline, advocacy, development project, or activism within or beyond a traditional educational setting, aimed at improving practice at local, regional, national, or international levels.
- Students are full-time and must maintain continuous registration full-time and pay full-time fees until all degree requirements, including the thesis (dissertation in practice), are completed.
- Students cannot transfer between the EdD and PhD programs.

Mode of Delivery: Hybrid
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

LHAE: Educational Leadership and Policy PhD

The **Doctor of Philosophy (PhD) program** in Educational Leadership and Policy is a thesis-based program that best serves students who are committed to scholarship and research on policy, leadership, change, and social diversity in elementary and secondary schools and other educational settings for children and youth. A combination of theory and real-world practice will enable students to tackle the complex challenges of current education policy, leadership, and reform. Program strengths include:

- A focus on equity, anti-oppression, and educational justice;
- Deep expertise in both the Ontario educational context and in comparative, international, and global contexts; and
- Training in advanced qualitative and quantitative research methods.

The PhD program is designed to develop critical and highly skilled researchers, educational leaders, and policy analysts who will advance knowledge in the field and make positive change in schools, school boards (districts), government ministries, foundations, nongovernmental agencies, and international organizations in Canada and around the world.

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

The program offers both full-time and flexible-time options. The department welcomes applicants with diverse but relevant backgrounds and experiences.

PhD Program (Full-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Leadership, Higher and Adult Education's additional admission requirements stated below.
- An appropriate master's degree, from a recognized university in a relevant discipline or professional program, with a minimum standing equivalent to a University of Toronto A–.
- In addition to responses to the Faculty questions in the online admissions application, a supplementary writing sample is required, which will help the admissions committee to assess an applicant's readiness to succeed in rigorous coursework and to conduct systematic research for the PhD. Applicants typically submit a master's-level Major Research Paper or thesis as their writing sample. Applicants who do not have a Major Research Paper or thesis must provide a writing sample that showcases their ability to write clearly and analytically about educational issues. The admissions committee will look for evidence that applicants understand how to, or have the potential to, craft an academic document, display an ability to define a research problem, devise an appropriate focus for an inquiry, assemble and analyze evidence, and develop conclusions in a rigorous manner. Examples include a master's-level course paper, a policy document, and a professional publication.
- Two letters of reference: one academic, the other either academic or professional.

Completion Requirements

- **Coursework.** Students must successfully complete a minimum of **3.0 full-course equivalents (FCEs)** as follows:
  - LHA3040H *People and Power in Organizations*.
  - 1.0 FCE in research methods, to be chosen in consultation with the faculty advisor (excluding LHA1003H and LHA1004H, which may not be counted towards this requirement). Students who have already attained an acceptable level of competence in research methodology may be authorized to choose a course in a different area of study.
  - At least 0.5 FCE at the 3000 level or the 6000 Special Topics level from the Educational Leadership and Policy program. Educational Leadership and Policy program course codes typically have a "0" in the second digit, for example "LHA30XX" and "LHA60XX." The following courses also count as Educational Leadership and Policy program courses: EDP3045H, EDP3145H, JOI3043H, JOI3048H, and JOI3049H.
- **Comprehensive examination.** Successful oral defence of a written paper that critically reviews and synthesizes the literature in the student's proposed thesis area, selected by the student in consultation with the supervisor/advisor. The comprehensive exam is normally taken at the end of Year 2, and must be taken no later than the end of Year 3. Students will be informed of their

status (pass or fail) at the end of the oral exam. Students who are not successful in their first attempt will be permitted one additional attempt to pass.
- **Thesis proposal hearing.**
- **Thesis.**
- Students must register continuously and pay the full-time fee until all degree requirements have been fulfilled.
- Students cannot transfer between the full-time and flexible-time PhD options.
- Students cannot transfer between the EdD and PhD programs.

Mode of Delivery: In person
Program Length: 4 years full-time
Time Limit: 6 years full-time

PhD Program (Flexible-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Leadership, Higher and Adult Education's additional admission requirements stated below.
- An appropriate master's degree, from a recognized university in a relevant discipline or professional program, with a minimum standing equivalent to a University of Toronto A–.
- In addition to responses to the Faculty questions in the online admissions application, a supplementary writing sample is required, which will help the admissions committee to assess an applicant's readiness to succeed in rigorous coursework and to conduct systematic research for the PhD. Applicants typically submit a master's-level Major Research Paper or thesis as their writing sample. Applicants who do not have a Major Research Paper or thesis must provide a writing sample that showcases their ability to write clearly and analytically about educational issues. The admissions committee will look for evidence that applicants understand how to, or have the potential to, craft an academic document, display an ability to define a research problem, devise an appropriate focus for an inquiry, assemble and analyze evidence, and develop conclusions in a rigorous manner. Examples include a master's-level course paper, a policy document, and a professional publication.
- Two letters of reference: one academic, the other either academic or professional.
- Applicants must demonstrate that they are active professionals engaged in activities related to their proposed program of study. Capacity to secure blocks of time to enable concentrated study is required.

Completion Requirements

- **Coursework.** Students must successfully complete a minimum of **3.0 full-course equivalents (FCEs)** as follows:
  - LHA3040H *People and Power in Organizations*.
  - 1.0 FCE in research methods, to be chosen in consultation with the faculty advisor (excluding LHA1003H and LHA1004H, which may not be counted towards this requirement). Students who have already attained an acceptable level of competence in research methodology may be authorized to choose a course in a different area of study.
  - At least 0.5 FCE at the 3000 level or the 6000 Special Topics level from the Educational Leadership and Policy program. Educational Leadership and Policy program course codes typically have a "0" in the second digit, for example "LHA30XX" and "LHA60XX." The following courses also count as Educational Leadership and Policy program courses: EDP3045H, EDP3145H, JOI3043H, JOI3048H, and JOI3049H.
- **Comprehensive examination.** Successful oral defence of a written paper that critically reviews and synthesizes the literature in the student's proposed thesis area, selected by the student in consultation with the supervisor/advisor. The comprehensive exam is normally taken at the end of Year 3, and must be taken no later than the end of Year 4. Students will be informed of their status (pass or fail) at the end of the oral exam. Students who are not successful in their first attempt will be permitted one additional attempt to pass.
- **Thesis proposal hearing.**
- **Thesis.**
- Students must register continuously until all degree requirements have been fulfilled. They register full-time during the first four years and may continue as part-time thereafter, with their department's approval.
- Students cannot transfer between the full-time and flexible-time PhD options.
- Students cannot transfer between the EdD and PhD programs.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

LHAE: Higher Education MA

The MA in Higher Education is a research-stream program that focuses on higher education as a field of study. It best serves students seeking the knowledge and research skills needed to pursue administrative and policy careers related to higher education. The MA program also prepares students to pursue doctoral studies in higher education and related fields.

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

The MA is available through both full-time and part-time studies. The department welcomes applicants with diverse but relevant backgrounds.

Master of Arts

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Leadership, Higher and Adult Education's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with a grade equivalent to a University of Toronto mid-B or better in the final year.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **4.0 full-course equivalents (FCEs)** as follows:
  - LHA3803H *Doctoral Seminar: Recurring Issues in Postsecondary Education*, to be taken at the beginning of the program.
  - 0.5 FCE in research methods approved by the faculty advisor.
  - 3.0 other FCEs, of which 1.5 FCEs must be from the Higher Education program.
- **Thesis.**

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 10 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

LHAE: Higher Education MEd

The **Master of Education** is a course-based, professional degree designed primarily for higher education professionals seeking to advance their understanding of the issues confronting their institution and the postsecondary system. It best serves students seeking research-informed knowledge on how colleges and universities work in order to pursue or advance administrative and policy careers related to higher education.

The program can be pursued on a full-time or part-time basis. Note that the field in Higher Education Leadership is offered part-time only.

The Master of Education is offered in four fields: 1) Education in the Professions; 2) Higher Education; 3) Higher Education Leadership; and 4) Student Development and Student Services in Higher Education.

Field: Education in the Professions

The Education in the Professions field is a course-based professional master’s designed for individuals working in areas such as the health professions, law and law enforcement, engineering, and public services, who are planning a career in educational administration, teaching, and leadership. This field introduces the broader area of higher education as well as current issues and research methods in education research in the professions.

Two options are offered: 1) Coursework Only Option; and 2) Coursework Plus Major Research Paper Option. Students initially apply to and register in the Coursework Only Option. For registration in the Coursework Plus Major Research Paper Option, departmental permission is required.

Field: Higher Education

The Higher Education field is focused on the issues confronting higher education institutions and the postsecondary education system. It is intended for students seeking research-informed knowledge on how colleges and universities work in order to pursue and advance their administrative and policy careers in higher education. Students are accepted every year and can register on a full-time or part-time basis.

Field: Higher Education Leadership

The Higher Education Leadership field is specifically designed for professionals working in higher education at entry to mid-levels, who seek to build their careers in higher education. With a focus on leadership skills for both the college and university contexts, the field is aimed to bridge the understanding and collaboration of leaders across both sectors. Students move through the Higher Education field as a cohort and register part-time. Classes are generally offered in a compressed format to suit working professionals. Applicants are accepted to the field every other year.

Field: Student Development and Student Services in Higher Education

The Student Development and Student Services in Higher Education field is designed for student development and student services professionals who are seeking to acquire the knowledge and skills that are evidence- and experientially based to provide leadership in various types of postsecondary institutions.

LHAE: Higher Education MEd; Field: Education in the Professions

The Master of Education in Higher Education is a course-based, professional degree designed primarily for higher education professionals seeking to advance their understanding of the issues confronting their institution and the postsecondary system. It best serves students seeking research-informed knowledge on how colleges and universities work in order to pursue or advance administrative and policy careers related to higher education. The program can be pursued on a full-time or part-time basis.

Within the MEd program, the **field in Education in the Professions** is a course-based professional master's designed for individuals working in areas such as the health professions, law and law enforcement, engineering, and public services, who are planning a career in educational administration, teaching, and leadership. This field introduces the broader area of higher education as well as current issues and research methods in education research in the professions.

The required courses in this field are offered online.

Application Requirements

- Current resumé.
- Transcript(s) from each postsecondary institution attended.
- One academic and one professional reference letter.
- Responses to Faculty questions in the online admissions application describing the applicant's motivation for wishing to take the program, as well as how previous qualifications and professional work experience support their interest in the program and the field.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Leadership, Higher and Adult Education's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with a grade equivalent to a University of Toronto mid-B or better in the final year.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **5.0 full-course equivalents (FCEs)** as follows:
  - LHA1803H *Recurring Issues in Postsecondary Education*
  - LHA1812H *Education and the Professions*
  - LHA1819H *Governance in Higher Education*
  - LHA1823H *Scholarship of Teaching and Learning*
  - LHA1844H *The Student Experience in Postsecondary Education*
  - LHA1848H *Innovative Curricula in Higher Education and Professional Programs*
  - 0.5 FCE in research methods (RM). Course will vary according to instructor availability.
  - 1.5 elective FCEs in the general Higher Education program.

Mode of Delivery: Online
Program Length: 4 sessions full-time (typical registration sequence: FWS-F); 10 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

LHAE: Higher Education MEd; Field: Higher Education

The Master of Education in Higher Education is a course-based, professional degree designed primarily for higher education professionals seeking to advance their understanding of the issues confronting their institution and the postsecondary system. It best serves students seeking research-informed knowledge on how colleges and universities work in order to pursue or advance administrative and policy careers related to higher education. The program can be pursued on a full-time or part-time basis.

Within the MEd program, the **field in Higher Education** focuses on the issues confronting higher education institutions and the postsecondary education system. It is intended for students seeking research-informed knowledge on how colleges and universities work in order to pursue and advance their administrative and policy careers in higher education.

This field is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.
Students are accepted every year and can register on a full-time or part-time basis.

Application Requirements

- Current resumé.
- Transcript(s) from each postsecondary institution attended.
- One academic and one professional reference letter.
- Responses to Faculty questions in the online admissions application describing the applicant's motivation for wishing to take the program, as well as how previous qualifications and professional work experience support their interest in the program and the field.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Leadership, Higher and Adult Education's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with a grade equivalent to a University of Toronto mid-B or better in the final year.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **5.0 full-course equivalents (FCEs)** as follows:
  - LHA1803H *Recurring Issues in Postsecondary Education*, to be taken at the beginning of the program.
  - 0.5 FCE in research methods.
  - 4.0 FCEs in electives, of which 1.5 FCEs must be from the Higher Education field.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F); 10 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

LHAE: Higher Education MEd; Field: Higher Education Leadership

The Master of Education in Higher Education is a course-based, professional degree designed primarily for higher education professionals seeking to advance their understanding of the issues confronting their institution and the postsecondary system. It best serves students seeking research-informed knowledge on how colleges and universities work in order to

pursue or advance administrative and policy careers related to higher education.

Within the MEd program, the **field in Higher Education Leadership** is specifically designed for professionals working in higher education at entry to mid-levels, who seek to build their careers in higher education. With a focus on leadership skills for both the college and university contexts, the field is aimed to bridge the understanding and collaboration of leaders across both sectors. Students move through the Higher Education field as a cohort and register part-time. Classes are generally offered in a compressed format to suit working professionals.

This field is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

Applicants are accepted every other year. This field is offered part-time only.

Application Requirements

- Current resumé.
- Transcript(s) from each postsecondary institution attended.
- One academic and one professional reference letter.
- Responses to Faculty questions in the online admissions application describing the applicant's motivation for wishing to take the program, as well as how previous qualifications and professional work experience support their interest in the program and the field.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Leadership, Higher and Adult Education's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with a grade equivalent to a University of Toronto mid-B or better in the final year.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **5.0 full-course equivalents (FCEs)** as follows:
  - LHA1803H *Recurring Issues in Postsecondary Education*, to be taken at the beginning of the program.
  - LHA1809H *Administration of Colleges and Universities*.
  - LHA1811H *Organizational Change in Higher Education*.
  - LHA1815H *Economics and Finance of Higher Education*.
  - LHA1836H *Critical Analysis of Research in Higher Education*.
  - LHA1847H *Human Resource and Diversity Issues in Higher Education*.
  - LHA1860H *Capstone Project for Higher Education Leadership Cohort Option*.
  - 1.5 FCEs in elective courses.

Mode of Delivery: In person
Program Length: 10 sessions part-time
Time Limit: 6 years part-time

LHAE: Higher Education MEd; Field: Student Development and Student Services in Higher Education

The Master of Education in Higher Education is a course-based, professional degree designed primarily for higher education professionals seeking to advance their understanding of the issues confronting their institution and the postsecondary system. It best serves students seeking research-informed knowledge on how colleges and universities work in order to pursue or advance administrative and policy careers related to higher education. The program can be pursued on a full-time or part-time basis.

Within the MEd program, the **field in Student Development and Student Services in Higher Education** is designed for student development and student services professionals who are seeking to acquire the knowledge and skills that are evidence- and experientially based to provide leadership in various types of postsecondary institutions.

This field is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

Application Requirements

- Current resumé.
- Transcript(s) from each postsecondary institution attended.
- One academic and one professional reference letter.
- Responses to Faculty questions in the online admissions application describing the applicant's motivation for wishing to take the program, as well as how previous qualifications and professional work experience support their interest in the program and the field.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Leadership, Higher and Adult Education's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with a grade equivalent to a University of Toronto mid-B or better in the final year.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **5.0 full-course equivalents (FCEs)** as follows:
  - LHA1803H *Recurring Issues in Postsecondary Education*, to be taken at the beginning of the program.

    - LHA1845H *Indigenous Student Perspectives in Higher Education*.
    - 1.5 FCEs in Student Development and Student Services:
        - LHA1844H *The Student Experience in Postsecondary Education*.
        - LHA1854H *Student Development Theory*.
        - LHA1856H *Advanced Student Development Theories in Higher Education*.
    - 2.5 FCEs including:
        - 0.5 FCE in research methods.
    - Depending on an individual student's professional experience, students may be advised to take LHA1853H *Introduction to Student Services*.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F); 10 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

LHAE: Higher Education EdD

The **Doctor of Education (EdD) program** in Higher Education is intended to shape highly competent professionals in leadership positions in higher education administration or policy. It best serves students seeking the knowledge and research skills needed to pursue research-grounded professional careers in colleges, universities, government agencies, professional associations, and international organizations.

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

The EdD program can be pursued either on a part-time or full-time basis. The department welcomes applicants with diverse but relevant backgrounds.

Students cannot transfer between the EdD and PhD programs.

Doctor of Education

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Leadership, Higher and Adult Education's additional admission requirements stated below.
- Relevant and acceptable MEd or MA. In individual cases, students with a highly relevant master's degree or other equivalent graduate degree may be admitted, but additional courses in Higher Education will be required.

Completion Requirements

- **Coursework.** Students must successfully complete a minimum of **4.0 full-course equivalents (FCEs)** as follows:
    - LHA1803H *Recurring Issues in Postsecondary Education*.
    - At least 1.0 other FCE in Higher Education.
    - 0.5 FCE in research methods approved by the faculty advisor.
    - 1.0 FCE selected either in Higher Education or in another graduate program at OISE or, with the approval of the faculty advisor, in another graduate department at the University of Toronto.
    - Supervised applied research practicum (0.5 FCE).
    - Collaborative proseminar (0.5 FCE).
- **Comprehensive examination.** The objective of the doctoral comprehensive examination is to ensure that all students master at least one substantive research area in Higher Education and have the capacity to develop their own written analysis of selected issues within this area. The examination is designed to ensure that students are familiar with the literature and concepts associated with their special area of study within the field of Higher Education.
- **Thesis** reporting the results of original research on an applied topic in postsecondary education.
- Students may begin their EdD degree on a full-time or a part-time basis but must maintain continuous registration. They must register full-time for a minimum of two consecutive sessions, not including Summer, of on-campus study. Once enrolled full-time, students must maintain continuous registration full-time and pay full-time fees until all degree requirements, including the thesis, are completed.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous); 6 years part-time
Time Limit: 6 years full-time; 6 years part-time

LHAE: Higher Education PhD

The **Doctor of Philosophy (PhD) program** in Higher Education fosters research-grounded study of higher education administration and policy. It best serves students seeking the knowledge and research skills needed to pursue careers in colleges, universities, government agencies, professional associations, and international organizations as a higher education expert.

This program is delivered in person, which means that while the program may offer some courses online, a student will take less than one-third of their courses online.

The program offers both full-time and flexible-time options.

The program is available in two delivery models:

- **Regular PhD stream:** students are accepted every year into the full-time or flexible-time program.
- **The Community College Leadership (CCL) Cohort:** available in select years. The CCL Cohort is designed for emerging college leaders and focuses specifically on the college system. The CCL is mostly offered in compressed mode, mainly on weekends, to suit working professionals pursuing a flexible-time program. Applicants must specify their interest in the CCL Cohort in their responses to Faculty questions in the online admissions application.

The department welcomes applicants with diverse but relevant backgrounds.

PhD Program (Full-Time Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Leadership, Higher and Adult Education's additional admission requirements stated below.
- Relevant and acceptable MEd or MA. In individual cases, students with a highly relevant master's degree or other equivalent graduate degree may be admitted, but additional courses in Higher Education may be required.

Completion Requirements

- **Coursework.** Students must successfully complete a minimum **3.0 full-course equivalents (FCEs)** as follows:
  - LHA3803H *Doctoral Seminar: Recurring Issues in Postsecondary Education*, to be taken at the beginning of the program.
  - LHA3804H *Doctoral Research Seminar in Postsecondary Education*, to be taken at the beginning of the program.
  - At least 1.0 other FCE in Higher Education.
  - 0.5 FCE in research methods approved by the faculty advisor.
  - 0.5 FCE selected either in Higher Education or in another graduate program at OISE, or, with the approval of the faculty advisor, in another graduate department at the University of Toronto.
- **Comprehensive examination.** The objective of the doctoral comprehensive examination is to ensure that all students master at least one substantive research area in Higher Education and have the capacity to develop their own written analysis of selected issues within this area. The examination is designed to ensure that students are familiar with the literature and concepts associated with their special area of study within the field of Higher Education.
- **Thesis** reporting the results of original research in postsecondary education.
- Students must register continuously and pay the full-time fee until all degree requirements have been fulfilled.
- Students cannot transfer between the full-time and flexible-time PhD options.
- Students cannot transfer between the EdD and PhD programs.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Flexible-Time Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Leadership, Higher and Adult Education's additional admission requirements stated below.
- Relevant and acceptable MEd or MA. In individual cases, students with a highly relevant master's degree or other equivalent graduate degree may be admitted, but additional courses in Higher Education may be required.
- Applicants must demonstrate that they are currently employed and are active professionals engaged in activities related to their proposed program of study. Applicants should have capacity to secure blocks of time to enable concentrated study.

Completion Requirements

- **Coursework.** Students must complete a minimum **3.0 full-course equivalents (FCEs)** as follows:
  - LHA3803H *Doctoral Seminar: Recurring Issues in Postsecondary Education*, to be taken at the beginning of the program.
  - LHA3804H *Doctoral Research Seminar in Postsecondary Education*, to be taken at the beginning of the program.
  - At least 1.0 other FCE in Higher Education.
  - 0.5 FCE in research methods approved by the faculty advisor.
  - 0.5 FCE selected either in Higher Education or in another graduate program at OISE, or, with the approval of the faculty advisor, in another graduate department at the University of Toronto.
- **Comprehensive examination.** The objective of the doctoral comprehensive examination is to ensure that all students master at least one substantive research area in Higher Education and have the capacity to develop their own written analysis of selected issues within this area. The examination is designed to ensure that students are familiar with the literature and concepts associated with their special area of study within the field of Higher Education.
- **Thesis** reporting the results of original research in postsecondary education.
- Students must register continuously until all degree requirements have been fulfilled. They must register full-time during the first four years and may continue as part-time thereafter, with their department's approval.
- Students cannot transfer between the full-time and flexible-time PhD options.
- Students cannot transfer between the EdD and PhD programs.

Mode of Delivery: In person
Program Length: 6 years full-time
Time Limit: 6 years full-time

LHAE: Adult Education and Community Development MA, MEd, PhD Courses

Not all courses are offered every year. Please review the course schedule on the Registrar's Office and Student Experience website.

Course Code	Course Title
LHA1100H	Introduction to Adult Education
LHA1101H	Program Planning in Adult Education
LHA1102H	Introduction to Community Development
LHA1103H	Introduction to Research Methods in Adult Education (RM)
LHA1105H	Introduction to Qualitative Research: Part I (RM)
LHA1106H	Introduction to Qualitative Research: Part II (RM)
LHA1107H	Developing and Leading High Performing Teams: Theory and Practice
LHA1108H	Adult Learning
LHA1109H	Challenging Systems of Power and Oppression through Creative Approaches
LHA1110H	Approaches to Teaching Adults
LHA1111H	Working with Survivors of Trauma
LHA1113H	Gender and Race at Work
LHA1114H	Commons, Community and Social Justice
LHA1115H	Learning for the Global Economy
LHA1119H	Creating a Learning Organization
LHA1120H	Professions, Learning, and Work
LHA1122H	Practicum in Adult Education and Community Development
LHA1142H	Young Adulthood in Crisis: Learning, Transitions, and Activism
LHA1143H	Introduction to Feminist Perspectives on Society and Education
LHA1144H	Queer Interventions: Tools for Community Organizing
LHA1145H	Participatory Research in the Community and the Workplace (RM)
LHA1146H	Women, War, and Learning
LHA1147H	Migration, Resettlement, and Learning
LHA1148H	Introduction to Workplace, Organizational, and Economic Democracy
LHA1149H	Precarity and Dispossession: Urban Poverty and Rebel Cities
LHA1150H	Critical Perspectives on Organizational Change
LHA1152H	Individual Reading and Research in Adult Education: Master's Level
LHA1180H	Indigenous Worldviews: Implications for Education
LHA1181H	Embodied Learning and Alternative Approaches to Community Wellness
LHA1182H	Nonprofits, Co-operatives, and the Social Economy: An Overview
LHA1183H	Master's Research Seminar
LHA1184H	Indigenous Knowledge: Implications for Education
LHA1190H	Community Healing and Peacebuilding
LHA1193H	Adult Education for Sustainability
LHA1194H	Cyberliteracy and Adult Education
LHA1195H	Technology @Work: The Internet in Workplace Learning and Change
LHA1196H	Walking Together, Talking Together: The Praxis of Reconciliation
LHA1197H	The Pedagogy of Food
LHA3102H	Doctoral Thesis Seminar
LHA3152H	Individual Reading and Research in Adult Education: Doctoral Level
LHA3182H	Participatory Democracy, Activism, and Citizenship Learning
LHA3183H	Introduction to Institutional Ethnography (RM)
LHA3184H	Indigenous Research Methodologies (RM)
LHA5100H to LHA5120H	Special Topics in Adult Education and Community Development: Master's Level
LHA6100H to LHA6110H	Special Topics in Adult Education and Community Development: Doctoral Level
CIE1001H	Introduction to Comparative, International, and Development Education
CIE1002H	Practicum in Comparative, International, and Development Education
CIE1006H	Transnational Perspectives on Democracy, Human Rights, and Democratic Education in an Era of Globalization
CIE6000H	Special Topics in Comparative, International, and Development Education
WPL1131H	Introduction to Workplace Learning and Social Change
WPL3930H	Practitioner Communities in Workplace Learning
WPL3931H	Advanced Studies in Workplace Learning and Social Change

Interprogram Courses

The following course is accepted for credit in the Adult Education and Community Development program and will satisfy the program's requirement. For descriptions, see the relevant programs.

Course Code	Course Title
SJE1925H	Indigenous Knowledge and Decolonization: Pedagogical Implications

LHAE: Educational Leadership and Policy MA, MEd, EdD, PhD Courses

Not all courses are offered every year. Please review the course schedule on the Registrar's Office and Student Experience website.

Some sections of existing courses are offered off campus and online in order to make them available to students in localities far from Toronto.

Course Code	Course Title
EDP3045H	Educational Policy Analysis
EDP3145H	Methodological Approaches for Researching Education Policy (RM)
JOI3043H	Development and Use of Surveys in Education Research (RM)
JOI3048H	Intermediate Statistics in Educational Research: Multiple Regression Analysis (RM)
JOI3049H	Multilevel and Longitudinal Modelling in Educational Research (RM)
JOI3050H	Quantitative Research Practicum (RM)
LHA1003H	Designing Master's Research Proposals
LHA1004H	Research Literacy in Educational Leadership and Policy
LHA1006H	Introduction to Statistics for Educational Research (RM)
LHA1012H	Organizational Culture and Decision Making
LHA1013H	Developing and Organizing People in Education
LHA1016H	School Program Development and Implementation
LHA1018H	Political Skill in the Education Arena
LHA1019H	Diversity and the Ethics of Educational Leadership and Policy
LHA1020H	Teachers and Educational Change
LHA1030H	The Legal Context of Education
LHA1035H	Sociology of Education
LHA1040H	Introduction to Educational Leadership and Policy: Policy, Leadership, Change, and Diversity
LHA1041H	Social and Policy Contexts of Schooling
LHA1042H	Educational Leadership and Diversity
LHA1043H	Decolonizing and Antiracist Approaches to Educational Leadership
LHA1047H	Managing Changes in Classroom Practice
LHA1048H	Educational Leadership and School Improvement
LHA1050H	Themes and Issues in Policy, Leadership, Change, and Social Diversity
LHA1052H	Individual Reading and Research in Educational Leadership and Policy: Master's Level
LHA1060H	School Leadership Seminar 1
LHA1061H	School Leadership Seminar 2
LHA1065H	Global Educational Equity and Quantitative Policy Research
LHA1066H	Comparative and International Perspectives on Gender and Education Policy and Practice
LHA1067H	Comparative Politics of Education Policy
LHA1070H	Internship in Educational Leadership and Policy
LHA2001Y	Major Research Paper
LHA3003H	Designing Research Proposals in Educational Leadership and Policy
LHA3004H	Research Literacy for the EdD Program
LHA3005H	Introduction to Research Methods for the EdD (RM)
LHA3006H	Data Analysis for the Education Doctorate (RM)
LHA3007H	Reviewing the Literature
LHA3008H	Professional Seminar and Dissertation Workshop in International Educational Leadership and Policy
LHA3030H	Advanced Legal Issues in Education
LHA3040H	People and Power in Organizations
LHA3041H	Doctoral Seminar on Policy Issues in Education
LHA3042H	Field Research in Educational Leadership and Policy (RM)
LHA3044H	Internship/Practicum in Educational Leadership and Policy

Course Code	Course Title
LHA3047H	Research Seminar on Leadership and Educational Change
LHA3052H	Individual Reading and Research in Educational Leadership and Policy: Doctoral Level
LHA3055H	Democratic Values, Student Engagement, and Democratic Leadership
LHA3064H	Global Governance and Educational Change: the Politics of International Cooperation in Education
LHA5000H to LHA5020H	Special Topics in Educational Leadership and Policy: Master's Level
LHA6000H to LHA6021H	Special Topics in Educational Leadership and Policy: Doctoral Level

Interprogram Courses

The following course is accepted for credit in the Educational Leadership and Policy program and will satisfy that program's requirement. For a description, see the relevant program.

Course Code	Course Title
LHA1815H	Economics and Finance of Higher Education

LHAE: Higher Education MA, MEd, EdD, PhD Courses

Not all courses are offered every year. Please review the course schedule on the Registrar's Office and Student Experience website.

Course Code	Course Title
LHA1803H	Recurring Issues in Postsecondary Education
LHA1804H	Issues in Medical/Health Professional Education
LHA1805H	The College Sector
LHA1806H	Systems of Higher Education
LHA1807H	System-Wide Planning and Policy for Higher Education
LHA1809H	Administration of Colleges and Universities
LHA1811H	Organizational Change in Higher Education
LHA1812H	Education and the Professions
LHA1814H	Lifelong Learning and Professional and Vocational Education
LHA1815H	Economics and Finance of Higher Education
LHA1816H	Sociology of Higher Education
LHA1818H	Politics of Higher Education
LHA1819H	Governance in Higher Education
LHA1822H	Teaching and Learning in Higher Education
LHA1823H	Scholarship of Teaching and Learning
LHA1825H	Comparative Education Theory and Methodology (RM)
LHA1826H	Comparative Higher Education
LHA1828H	Evaluation in Higher Education (RM)
LHA1834H	Qualitative Research in Higher Education (RM)
LHA1835H	Logics and Strategies of Case Study Research (RM)
LHA1836H	Critical Analysis of Research in Higher Education (RM)
LHA1844H	The Student Experience in Postsecondary Education
LHA1845H	Indigenous Students in Higher Education
LHA1846H	Internationalization of Higher Education in a Comparative Perspective
LHA1847H	Human Resource and Diversity Issues in Higher Education
LHA1848H	Innovative Curricula in Higher Education and Professional Programs
LHA1849H	Faculty in Colleges and Universities
LHA1852H	Individual Reading and Research in Higher Education: Master's Level
LHA1853H	Introduction to Student Services
LHA1854H	Student Development Theory
LHA1855H	Capstone in Student Development and Student Services
LHA1856H	Advanced Student Development Theories in Higher Education
LHA1858H	Internship in Student Services 1
LHA1859H	Internship in Student Services 2
LHA1860H	Capstone Project for Higher Education Leadership Cohort Option
LHA3803H	Doctoral Seminar: Recurring Issues in Postsecondary Education
LHA3804H	Doctoral Research Seminar in Higher Education

Course Code	Course Title
LHA3810H	International Academic Relations
LHA3852H	Individual Reading and Research in Higher Education: Doctoral Level
LHA5800H to LHA5825H	Special Topics in Higher Education: Master's Level
LHA6800H to LHA6810H	Special Topics in Higher Education: Doctoral Level

Interprogram Courses

The following course is accepted for credit in the Higher Education program and will satisfy that program's requirement. For a description, see the relevant program.

Course Code	Course Title
SJE2941H	Bourdieu: Theory of Practice in Social Sciences

Linguistics

Linguistics: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Linguistics

MA and PhD

- Fields:
  - Language Variation;
  - Psycholinguistics;
  - Theoretical Linguistics

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Jewish Studies**
  - Linguistics, PhD
- **Sexual Diversity Studies**
  - Linguistics, MA, PhD

Overview

The discipline of linguistics focuses on the nature of human language and how its many systems can be accounted for. The Department of Linguistics focuses on three major areas — theoretical linguistics, language variation and change, and psycholinguistics — with an emphasis on the intersections between these areas.

The core areas of research and teaching in the MA and PhD are:

- Theoretical Linguistics (generative grammar: phonetics, phonology, morphology, syntax, semantics)
- Language Variation (sociolinguistics, dialectology, language variation, language change)
- Psycholinguistics (comprehension and production, language acquisition, both in relation to linguistic theory)

Contact and Address

Web: www.linguistics.utoronto.ca
Email: linguistics@utoronto.ca
Telephone: (416) 978-4029
Fax: (416) 971-2688

Department of Linguistics
University of Toronto
Sidney Smith Hall 4th Floor, 100 St. George Street
Toronto, Ontario M5S 3G3 Canada

Linguistics: Graduate Faculty

Full Members

Atkinson, Emily - BA, MA, MS, PhD
Bejar, Susana - BA, MA, PhD
Chambers, Craig - BA, MA, MA, PhD
Cuervo, M. Cristina - PhD
Denis, Derek - BA, MA, PhD
Grigoroglou, Myrto - PhD, PhD
Hachimi, Atiqa - BA, MA, PhD
Heller, Daphna - PhD
Ippolito, Michela - BA, MPH, PhD
Jurgec, Peter - BA, PhD, ScD
Kahnemuyipour, Arsalan - PhD
Kang, Yoonjung - BA, PhD
Kochetov, Alexei - BA, MA, PhD
Kush, Dave W. - BA, PhD
Monahan, Philip Joseph - BPhil, MPH, PhD
Moulton, Keir - PhD ***(Graduate Chair)***
Nagy, Naomi - BA, PhD ***(Chair)***
Oliveira de Lima, Suzi - PhD
Perez-Leroux, Ana Teresa - MA, PhD
Rice, Keren - BA, MA, PhD
Roberge, Yves - BA, MA, PhD
Schertz, Jessamyn Leigh - BA, MS, PhD
Tagliamonte, Sali - AB, MA, DPhil
Thomas, Guillaume - PhD ***(Graduate Coordinator)***

Members Emeriti

Chambers, J. - DipEd, BA, MA, PhD
Dresher, B. Elan - BA, PhD
Johns, Alana - BA, MA, PhD
Massam, Diane - BA, MA, PhD

Associate Members

Akinbo, Samuel - PhD
Beekhuizen, Barend - BA, MA, PhD
Bhatt, Parth - BA, MA, PhD
Bhattasali, Shohini - BA, MA, PhD
Bird, Sonya - PhD
Brant, Tahohtharatye Joe - MA
Brousseau, Anne-Marie - PhD
Chasin, Marshall - BSc, MSc
Colantoni, Laura - MA, PhD
DeCaire, Ryan - MA
Dunbar, Ewan - BS, MA, PhD
Helms-Park, Rena - BA, MA, AM, DPhil
Johnson, Elizabeth - BA, MA, PhD
Mateo Pedro, Pedro - PhD
Nikiema, Emmanuel - PhD
Pirvulescu, Mihaela - MA, PhD
Sanders, Nathan - PhD
Schallert, Joseph - PhD
Sidnell, Jack - BA, MA, PhD
Steele, Jeffrey - BA, MA, PhD

Taniguchi, Ai - BA, MA, PhD
Tieu, Lyn - BS, MA, MA, PhD
Troberg, Michelle - BA, BE, MA, PhD
Umbal, Pocholo - PhD

Linguistics: Linguistics MA

The MA program in Linguistics offers comprehensive training in three areas of strength: theoretical linguistics, language variation and change, and psycholinguistics. Students complete rigorous coursework with research training in their preferred area of study. By the time of graduation, students are equipped with professional-level skills in interpretation of data, analysis, and argumentation. The department offers one- and two-year MA options. The majority of students are admitted to the one-year MA option.

MA Program (One-Year Advanced-Standing Option — Standard Admission)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Linguistics' additional admission requirements stated below.
- Applicants with a bachelor's degree, with a minimum B+ average, may be admitted to the one-year program. Admission requires a strong background in linguistics with at least courses in introductory phonetics, phonology, morphology, and syntax.

Completion Requirements

- **Coursework.** Students must normally complete a total of **3.5 full-course equivalents (FCEs)** as follows:
  - 1.0 FCE of the following, if not already taken: JAL1145H *Field Methods*, LIN1121H *Phonological Theory*, LIN1131H *Introduction to Syntactic Theory*, or their equivalents.
  - 1.5 FCEs from other Linguistics course offerings determined by the Graduate Coordinator.
  - LIN2100Y *Linguistic Forum* including regular class meetings in which students discuss and present their research topics and a final paper, completed under the supervision of a faculty member working in the same research area.
- All students must demonstrate an ability to read professionally in **one language other than English**. The choice of language must be approved by the Graduate Coordinator, having regard to the student's field of research. In some circumstances, demonstrated competence in computer programming may satisfy the requirement.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

MA Program (Two-Year)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Linguistics' additional admission requirements stated below.
- Applicants with a bachelor's degree, with a minimum B+ average, may be admitted to the two-year MA program. Admission is offered to rare instances to exceptional applicants whose background in linguistics is limited.

Completion Requirements

- **Coursework.** Students must normally complete a total of **8.0 full-course equivalents (FCEs)** as follows:
  - Year 1: 4.0 FCEs in phonetics, phonology, morphology, and syntax if not completed during the student's undergraduate degree;
  - Year 2: 4.0 FCEs as follows:
    - 2.0 FCEs: JAL1145H, LIN1103H, LIN1121H, LIN1131H, or their equivalents, if not already taken.
    - 1.0 FCE from other Linguistics course offerings as determined by the Graduate Coordinator.
    - LIN2100Y *Linguistic Forum* including regular class meetings in which students discuss and present their research topics and a final paper, completed under the supervision of a faculty member working in the same research area.
- All students must demonstrate an ability to read professionally in **one language other than English**. The choice of language must be approved by the Graduate Coordinator, having regard to the student's field of research. In some circumstances, demonstrated competence in computer programming may satisfy the requirement.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Linguistics: Linguistics PhD

The **Doctor of Philosophy (PhD) program** in Linguistics offers comprehensive and rigorous training in an environment that encourages collaboration across the fields of Theoretical Linguistics, Language Variation and Change, and Psycholinguistics. Students achieve an advanced understanding of language and are equipped with professional-level skills in analysis, argumentation, interpretation, and quantitative reasoning. While many graduates choose academic positions, many others choose to pursue careers in fields such as education, publishing, and data science.

Applicants may enter the PhD program via one of two routes: 1) following completion of an MA degree; 2) direct entry following completion of a bachelor's degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Linguistics' additional admission requirements stated below.
- University of Toronto MA in Linguistics, or its equivalent, with at least an A– average.

Completion Requirements

- **Coursework**. By the end of Year 2, students must successfully complete a total of **5.5 full-course equivalents (FCEs)** with a minimum median grade of A–:
  - 2.5 FCEs or their equivalents must be completed if they have not been taken previously:
    - JAL1145H *Field Methods*
    - LIN1104H *Quantitative Methods in Linguistics*
    - LIN1121H *Phonological Theory*
    - LIN1131H *Introduction to Syntactic Theory*
    - LIN1145H *Semantics*
    - If these have been previously taken, a balance of electives must be taken to fulfil the 2.5 FCE requirement, chosen in consultation with the Graduate Coordinator.
  - 0.5 FCE from:
    - JLP2451H *Language Acquisition*
    - JLP2452H *Language Acquisition and Linguistic Theory*
    - LIN1070H *Language Processing*
    - LIN1106H *Introduction to Experimental Design*
    - LIN1112H *Phonetic Analysis*
    - LIN1156H *Language Variation and Change: Theory and Analysis*
    - LIN1211H *Advanced Phonetics*
    - LIN1255H *Advanced Language Variation and Change I*
    - LIN1256H *Advanced Language Variation and Change II*
    - LIN1271H *Advanced Psycholinguistics I*
    - LIN1272H *Advanced Psycholinguistics II*
    - LIN1276H *Topics in Speech Perception*.
  - Of the above courses, 1.0 FCE must be taken at the 1200 level, with 0.5 FCE in Phonology, Syntax, or Semantics.
  - LIN2101H *Junior Forum*, taken in Year 1.
  - LIN2201Y *Generals Paper I* and LIN2202Y *Generals Paper II* — completion in two distinct areas of study. Topics must be approved by the Graduate Coordinator.
- **Residency**. During Years 1 and 2, students are normally required to be on campus full-time; i.e., in such geographical proximity as to be able to visit the campus regularly and to participate fully in the department's activities associated with the program.
- **Language**. Students must demonstrate an ability to read professionally in one language other than English. The choice of language must be approved by the Graduate Coordinator, having regard to the student's field of research. In some circumstances, demonstrated competence in computer programming may satisfy the requirement.
- **Thesis**. Candidates are required to present a thesis, which must be an original contribution to linguistic knowledge. Both the preparation for and the writing of the thesis will be carried out under the supervision of members of the department.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Linguistics' additional admission requirements stated below.
- Applicants with a bachelor's degree, with a minimum A– average, may be admitted to the direct-entry PhD option. Admission requires a strong background in linguistics with courses in introductory phonetics, phonology, morphology, syntax, and a demonstration of capacity for original research.

Completion Requirements

- **Coursework**. By the end of Year 3, students must successfully complete a total of **7.5 full-course equivalents (FCEs)** with a minimum median grade of A–:
  - 2.5 FCEs or their equivalents must be completed if they have not been taken previously:
    - JAL1145H *Field Methods*
    - LIN1104H *Quantitative Methods in Linguistics*
    - LIN1121H *Phonological Theory*
    - LIN1131H *Introduction to Syntactic Theory*
    - LIN1145H *Semantics*
    - If these have been previously taken, a balance of electives must be taken to fulfil the 3.0 FCE requirement, chosen in consultation with the Graduate Coordinator.
  - 0.5 FCE from:
    - JLP2451H *Language Acquisition*
    - JLP2452H *Language Acquisition and Linguistic Theory*
    - LIN1070H *Language Processing*
    - LIN1106H *Introduction to Experimental Design*
    - LIN1112H *Phonetic Analysis*
    - LIN1156H *Language Variation and Change: Theory and Analysis*
    - LIN1211H *Advanced Phonetics*
    - LIN1255H *Advanced Language Variation and Change I*
    - LIN1256H *Advanced Language Variation and Change II*
    - LIN1271H *Advanced Psycholinguistics I*
    - LIN1272H *Advanced Psycholinguistics II*
    - LIN1276H *Topics in Speech Perception*.
  - 2.0 elective FCEs; of these, 0.5 FCE may be taken outside the Department of Linguistics, upon consultation with the Graduate Coordinator.

    - Of the above courses, 1.0 FCE must be taken at the 1200 level, with 0.5 FCE in Phonology, Syntax, or Semantics.
    - LIN2101H *Junior Forum*, taken in Year 1.
    - LIN2201Y *Generals Paper I* and LIN2202Y *Generals Paper II* — completion in two distinct areas of study. Topics must be approved by the Graduate Coordinator.
- **Residency**. During Years 1, 2, and 3, students are normally required to be on campus full-time; i.e., in such geographical proximity as to be able to visit the campus regularly and to participate fully in the department's activities associated with the program.
- **Language**. Students must demonstrate an ability to read professionally in one language other than English. The choice of language must be approved by the Graduate Coordinator, having regard to the student's field of research. In some circumstances, demonstrated competence in computer programming may satisfy the requirement.
- **Thesis**. Candidates are required to present a thesis, which must be an original contribution to linguistic knowledge. Both the preparation for and the writing of the thesis will be carried out under the supervision of members of the department.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Linguistics: Linguistics MA, PhD Courses

Course descriptions and other information are available each spring from the Coordinator of Graduate Studies. Not all courses are offered in a given year. Students should consult the departmental website.

Course Code	Course Title
JAL1145H	Field Methods
JFL1107H	Computational Methods for Linguists
JFL1207H	Advanced Computational Methods for Linguists
JLP2450H	Psycholinguistics
JLP2451H	Language Acquisition
JLP2452H	Language Acquisition and Linguistic Theory
LIN1001H	Introduction to Linguistics: Sound Structure
LIN1002H	Introduction to Linguistics: Sentence Structure and Meaning
LIN1028H	Phonetics
LIN1029H	Sound Patterns in Language
LIN1032H	Syntactic Patterns
LIN1041H	Introduction to Semantics
LIN1070H	Language Processing
LIN1103H	Introduction to Analysis and Argumentation
LIN1104H	Quantitative Methods in Linguistics
LIN1105H	Advanced Quantitative Methods in Linguistics
LIN1106H	Introduction to Experimental Design
LIN1107H	Computational Methods in Linguistics
LIN1111H	Acoustic Phonetics
LIN1112H	Phonetic Analysis
LIN1121H	Phonological Theory
LIN1131H	Introduction to Syntactic Theory
LIN1133H	Morphology: Morphosyntactic Issues
LIN1145H	Semantics
LIN1151H	Urban Dialectology
LIN1156H	Language Variation and Change: Theory and Analysis
LIN1211H	Advanced Phonetics
LIN1221H	Advanced Phonology I
LIN1222H	Advanced Phonology II
LIN1231H	Advanced Syntax I
LIN1232H	Advanced Syntax II
LIN1245H	Advanced Semantics I
LIN1246H	Advanced Semantics II
LIN1255H	Advanced Language Variation and Change I
LIN1256H	Advanced Language Variation and Change II
LIN1271H	Advanced Psycholinguistics I
LIN1272H	Advanced Psycholinguistics II
LIN1276H	Topics in Speech Perception
LIN1503H	Reading Seminar
LIN1505H	Research Seminar
LIN2100Y	Linguistic Forum
LIN2101H	Junior Forum
LIN2201Y	Generals Paper I
LIN2202Y	Generals Paper II

Management & Innovation

Management & Innovation: Introduction

Faculty Affiliation

University of Toronto Mississauga (UTM)

Degree Programs

Biotechnology

MBiotech

- Fields:
  - Biopharmaceutical;
  - Digital Health Technologies

Forensic Accounting

MFAcc

Management & Professional Accounting

MMPA (admissions have been administratively suspended)

Management of Innovation

MMI

Sustainability Management

MScSM

- Concentrations:
  - Management;
  - Science

Urban Innovation

MUI

Combined Degree Programs

- UTM, Environmental Management (Major) Honours BA / MScSM
- UTM, Environmental Management (Specialist) Honours BA / MScSM
- UTM, Environmental Science (Major) Honours BSc / MScSM
- UTM, Environmental Science (Specialist) Honours BSc / MScSM

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Environmental Studies**
  - Sustainability Management, MScSM
- **Sexual Diversity Studies**
  - Sustainability Management, MScSM

Overview

The Institute for Management & Innovation (IMI) encourages collaboration and empowers transformational, interdisciplinary thinking to combine and share knowledge and discover new and better solutions to the world's wicked problems. IMI's faculty are world-class scholars from a wide range of disciplines, including management, political science, economics, planning, geography, and chemistry. IMI is home to the University of Toronto Mississauga's professional graduate programs, undergraduate programming, hubs, and research initiatives, which aim to develop innovation-focused leaders who will contribute to creating a more sustainable world.

IMI’s interdisciplinary programs blend business, natural/physical sciences, and social sciences, and are distinctive in their focus on experiential and applied learning. IMI faculty members contribute to graduate programs including: the Master of Biotechnology (MBiotech), Master of Forensic Accounting (MFAcc), Master of Management of Innovation (MMI), Master of Management & Professional Accounting (MMPA), Master of Science in Sustainability Management (MScSM), and Master of Urban Innovation (MUI); and undergraduate programs including: Minor in Business, Science, and Entrepreneurship, and the Certificate in Global Sustainability. IMI is home to the BigDataAIHUB, the ICUBE incubator, and IMIx, which delivers impactful executive education programs.

Contact and Address

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Biotechnology

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Forensic Accounting

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Master of Forensic Accounting Program
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Management & Professional Accounting

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Management of Innovation

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Master of Management of Innovation Program
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Sustainability Management

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Master of Science in Sustainability Management Program
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Urban Innovation

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Management & Innovation: Graduate Faculty

Full Members

Aggarwal, Pankaj - BEc, MBA, MBA, PhD
Aivazian, Varouj - BS, MA, PhD
Berrey, Ellen - AB, PhD
Brail, Shauna - BA, MA, PhD ***(Director)***
Brooks, Leonard - BCom, MBA, CA, CPA
Caraway, Brett - BA, MA, PhD
Daniere, Amrita - AB, PhD
Galasso, Alberto - PhD
Hirsh, Jacob - BSc, MA, PhD
Hossain, Tanjim - BA, BS, PhD
Kang, Sonia - BSc, MA, PhD
Kant, Shashi - BE, MA, PhD
Krull, Ulrich - BSc, MSc, PhD
Lacetera, Nicola - PhD
Li, Yue - BSc, MBA, PhD
Park, Andreas - MEc, MPH, PhD
Prosser, Scott - BSc, MSc, DPhil
Rotenberg, Wendy - BA, MBA, PhD
Scharper, Stephen - BA, MA, PhD
Smieliauskas, Waldemar - BS, MS, PhD
Toh, Soo Min - BBA, PhD
Tombak, Mihkel - BS, MBA, AM, PhD
Vinodrai, Tara - BA, MA, PhD ***(Master of Urban Innovation Program Director)***
Vyas, Dushyantkumar - PhD
Wensley, Anthony - MA, MA, MBA, PhD
Wolfe, David - BA, MA, PhD
Ye, Minlei - PhD
Zweig, David - BA, MASc, DPhil

Associate Members

Allen, Guy - BA, MA, PhD
Gaetani, Ruben - BA, MA, MSc, PhD
Innocente, Nathan - BA, MA, MA
Iqbal, Abraham - BCom, MA, CPA
Kirsch, Tanya - BCom
Kitunen, Joan - BBM, CA, CPA
Marin, Michael - BCom, MBA, PhD
Parker, Jayson - PhD, PhD
Parkinson, Jack - BA, MA, PhD
Radhakrishnan, Phanikiran - DPhil
Revers, Leigh - MA, PhD
Schneider, Manfred - BCom, JD, MBA, CA, CPA
Schumann, Eckhard - BComm, CA, CPA
Stahlkopf, Irene - BComm, CA, CPA
Trippen, Gerhard - MCS, PhD
Yousie, Kevin - BBA, MBA
Yung, Otto - BComm, BASc, MA, MBA
Zuliani, Elisa - BBM, CA

Management & Innovation: Biotechnology MBiotech

The **Master of Biotechnology (MBiotech)** is a 24-month interdisciplinary, course-based professional degree program. Students come from various science and/or engineering backgrounds with the common goal of pursuing a career in the biotechnology, medical device, and pharmaceutical industries.

The program meets the evolving needs of students and this global industry sector. Faculty and instructors from various University of Toronto Faculties, biotechnology and pharmaceutical industries, and governmental agencies provide a truly interdisciplinary learning experience. Introductory laboratory courses and a year-long work internship round out the broad-based learning environment.

The program is a full-time, course-based master's degree which is launched in May each year.

Management & Innovation: Biotechnology MBiotech; Field: Biopharmaceutical (Effective Summer 2024)

MBiotech; Field: Biopharmaceutical

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Institute for Management & Innovation's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university in any area of biological sciences, chemistry, engineering, or related field with a minimum mid-B standing in the final two years of study.
- Applicants who have completed their studies outside of Canada must also submit their Graduate Record Examination (GRE) scores and meet the SGS minimum standards for English proficiency.
- The MBiotech program also evaluates applicants on their letter of intent, CV, three references, and both a science and business interview.

Completion Requirements

Students must complete **9.5 graduate full-course equivalents (FCEs)** over a 24-month period:

- 4.5 FCEs in MBiotech courses (includes credits for Seminar and Work Term Placement):
  - BTC1600H *Biopartnering I*
  - BTC1610H *Biopartnering II*
  - BTC1900Y *Work Term I (Internship)*
  - BTC1910Y *Work Term II (Internship)*
  - BTC2000H *Effective Management Practices*
  - BTC2010H *Fundamentals of Managerial Concepts*
  - BTC2030H *Management of Technological Innovation*
- 3.5 FCEs in Biopharmaceutical courses:
  - BTC1700H *Molecular Biology Laboratory*
  - BTC1710H *Biomaterials and Protein Chemistry Theory*
  - BTC1720H *Biomaterials and Protein Chemistry Lab*
  - BTC1800H *Biotechnology in Medicine*
  - BTC1810H *Biotechnology and Drug Manufacturing*
  - BTC1820H *Biotechnology in Agriculture and Natural Products*
  - BTC2020H *Society, Organizations, and Technology*
- 1.5 FCEs in elective courses chosen from:
  - BTC1860H *Generations of Advanced Medicine: Biologics in Therapy (GAMBiT)*
  - BTC1920Y *Work Term III (Internship)*
  - BTC2100Y *Thesis Project in Biotechnology*
  - BTC2110H *Topics in Biotechnology*
  - BTC2120H *Topics in Biotechnology*
  - IMI elective courses
  - Other graduate courses approved by Program Directors.

An ongoing **seminar series** led by university, industry, and government specialists links all the participants with the academic, practical, and applied aspects of the program.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: S-FWS-FW)
Time Limit: 3 years full-time

Management & Innovation: Biotechnology MBiotech; Field: Biopharmaceutical (Effective Summer 2025)

MBiotech; Field: Biopharmaceutical

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Institute for Management & Innovation's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university in any area of biological sciences, chemistry, engineering, or related field with a minimum mid-B standing in the final two years of study.
- Applicants who have completed their studies outside of Canada must also submit their Graduate Record Examination (GRE) scores and meet the SGS minimum standards for English proficiency.
- The MBiotech program also evaluates applicants on their letter of intent, CV, three references, and both a science and business interview.

Completion Requirements

Students must complete **9.5 graduate full-course equivalents (FCEs)** over a 24-month period:

- 4.5 FCEs in MBiotech courses (includes credits for Seminar and Work Term Placement):
  - BTC1600H *Biopartnering I*
  - BTC1610H *Biopartnering II*
  - BTC1900Y *Work Term I (Internship)*
  - BTC1910Y *Work Term II (Internship)*
  - BTC2000H *Effective Management Practices*
  - BTC2010H *Fundamentals of Managerial Concepts*
  - BTC2030H *Management of Technological Innovation*
- 3.5 FCEs in Biopharmaceutical courses:
  - BTC1700H *Molecular Biology Laboratory*
  - BTC1710H *Biomaterials and Protein Chemistry Theory*
  - BTC1730H *Structural Biology in Drug Development*
  - BTC1800H *Biotechnology in Medicine*
  - BTC1810H *Biotechnology and Drug Manufacturing*
  - BTC1820H *Biotechnology in Agriculture and Natural Products*
  - BTC2020H *Society, Organizations, and Technology*
- 1.5 FCEs in elective courses chosen from:
  - BTC1860H *Generations of Advanced Medicine: Biologics in Therapy (GAMBiT)*
  - BTC1920Y *Work Term III (Internship)*
  - BTC2100Y *Research Project in Biotechnology*
  - BTC2110H *Topics in Biotechnology*
  - BTC2120H *Topics in Biotechnology*
  - IMI elective courses
  - Other graduate courses approved by Program Directors.

An ongoing **seminar series** led by university, industry, and government specialists links all the participants with the academic, practical, and applied aspects of the program.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: S-FWS-FW)
Time Limit: 3 years full-time

Management & Innovation: Biotechnology MBiotech; Field: Digital Health Technologies (Effective Summer 2024)

MBiotech; Field: Digital Health Technologies

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Institute for Management & Innovation's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university in any area of biological sciences, chemistry, engineering, or related field with a minimum mid-B standing in the final two years of study.
- Applicants who have completed their studies outside of Canada must also submit their Graduate Record Examination (GRE) scores and meet the SGS minimum standards for English proficiency.
- The MBiotech program also evaluates applicants on their letter of intent, CV, three references, and both a science and business interview.

Completion Requirements

Students must complete **9.5 graduate full-course equivalents (FCEs)** over a 24-month period:

- 4.5 FCEs in MBiotech courses (includes credits for Seminar and Work Term Placement):
  - BTC1600H *Biopartnering I*
  - BTC1610H *Biopartnering II*
  - BTC1900Y *Work Term I* (internship)
  - BTC1910Y *Work Term II* (internship)
  - BTC2000H *Effective Management Practices*
  - BTC2010H *Fundamentals of Managerial Concepts*
  - BTC2030H *Management of Technological Innovation*
- 4.0 FCEs in Digital Health Technologies courses:
  - BTC1842H *Medical Device Reimbursement*
  - BTC1855H *Coding in R Language*
  - BTC1859H *Data Science in Health I*
  - BTC1877H *Data Science in Health II*
  - BTC1878H *Health Data Visualization with Tableau*
  - BTC1882H *Digital Ethnography in Health*
  - BTC1895H *Digital Health Marketing and Regulatory Compliance*
  - BTC1899H *Digital Health Technology*
- 1.0 FCE in elective courses chosen from:
  - BTC1860H *Generations of Advanced Medicine: Biologics in Therapy* (GAMBiT)
  - BTC1889H *Deep Learning in Health*
  - BTC1896H *Technology and Cognitive Performance*
  - BTC1920Y *Work Term III* (internship)
  - BTC2100Y *Thesis Project in Biotechnology*
  - BTC2110H *Topics in Biotechnology*
  - BTC2120H *Topics in Biotechnology*
  - IMI elective courses
  - Other graduate courses approved by Program Directors.

An ongoing **seminar series** led by university, industry, and government specialists links all the participants with the academic, practical, and applied aspects of the program.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: S-FWS-FW)
Time Limit: 3 years full-time

Management & Innovation: Biotechnology MBiotech; Field: Digital Health Technologies (Effective Summer 2025)

MBiotech; Field: Digital Health Technologies

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Institute for Management & Innovation's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university in any area of biological sciences, chemistry, engineering, or related field with a minimum mid-B standing in the final two years of study.
- Applicants who have completed their studies outside of Canada must also submit their Graduate Record Examination (GRE) scores and meet the SGS minimum standards for English proficiency.
- The MBiotech program also evaluates applicants on their letter of intent, CV, three references, and both a science and business interview.

Completion Requirements

Students must complete **9.5 graduate full-course equivalents (FCEs)** over a 24-month period:

- 4.5 FCEs in MBiotech courses (includes credits for Seminar and Work Term Placement):
  - BTC1600H *Biopartnering I*
  - BTC1610H *Biopartnering II*
  - BTC1900Y *Work Term I* (internship)
  - BTC1910Y *Work Term II* (internship)
  - BTC2000H *Effective Management Practices*
  - BTC2010H *Fundamentals of Managerial Concepts*
  - BTC2030H *Management of Technological Innovation*
- 4.5 FCEs in Digital Health Technologies courses:
  - BTC1842H *Medical Device Reimbursement*
  - BTC1855H *Coding in R Language*
  - BTC1859H *Data Science in Health I*
  - BTC1877H *Data Science in Health II*
  - BTC1878H *Health Data Visualization with Tableau*
  - BTC1882H *Digital Ethnography in Health*
  - BTC1889H *Deep Learning in Health*
  - BTC1895H *Python Applications in Digital Health Marketing and Regulatory Compliance*
  - BTC1899H *Digital Health Technology*
- 0.5 FCE in elective courses chosen from:
  - BTC1860H *Generations of Advanced Medicine: Biologics in Therapy* (GAMBiT)
  - BTC1896H *Technology and Cognitive Performance*
  - BTC1920Y *Work Term III* (internship)
  - BTC2100Y *Research Project in Biotechnology*
  - BTC2105H *Supervised Study in Biotechnology*
  - BTC2110H *Topics in Biotechnology*
  - BTC2120H *Topics in Biotechnology*
  - IMI elective courses
  - Other graduate courses approved by Program Directors.

An ongoing **seminar series** led by university, industry, and government specialists links all the participants with the academic, practical, and applied aspects of the program.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: S-FWS-FW)
Time Limit: 3 years full-time

Management & Innovation: Forensic Accounting MFAcc

The **Master of Forensic Accounting (MFAcc)** program provides graduates with the most thorough and rigorous preparation available in the investigative and forensic accounting field. Consequently, MFAcc graduates are expected to become recognized as the foremost forensic professionals in their chosen fields, whether those are in forensic accounting practice; in compliance functions in banks, insurance companies, and brokerages; business valuation; fraud investigation in law enforcement; securities enforcement; or in international forensic roles for the World Bank, the United Nations and its programs, and others.

MFAcc Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Institute for Management & Innovation's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university in commerce, business administration, or accounting, with standing equivalent to at least a University of Toronto mid-B in the final year.
- Two years of relevant experience in business.
- Submission of an official MFAcc application via the SGS online application system.

Completion Requirements

- Students must successfully complete **5.0 graduate full-course equivalents (FCEs)** over a two-year period.
- This part-time program allows students to participate from anywhere in the world and includes e-learning modules featuring group discussions, assignments, and formal examinations. Additionally, students are required to attend a one-week intensive in-residence session, called the Integrative Capstone.

Program Path

Year 1: Fall

- IFA1900H *Forensic Accounting and Investigation, Fraud, and Cybercrime*

- IFA1905H *Fraud Prevention, Risk Assessment and Investigation, Data Analytics, and Security*

Year 1: Winter

- IFA1901H *Forensic Accounting Professional and Practice Issues*
- IFA1906H *Money Laundering, Asset Tracing and Recovery, and International Aspects of Fraud*

Year 1: Summer

- IFA1907H *Legal and Legal Process Issues for Forensic Accountants*

Year 2: Fall

- IFA2900H *Loss Quantification*
- IFA2905H *Advanced Forensic Investigation and Psychological Aspects of White Collar Crime*

Year 2: Winter

- IFA2903H *Research Project on Emerging Issues/Advanced Topics*
- IFA2906H *Business Valuation, Bankruptcy and Insolvency, and Advanced Loss Quantification*

Year 2: Summer

- IFA2904H *Integrative Capstone*

Mode of Delivery: Hybrid
Program Length: 6 sessions part-time (typical registration sequence: FWS-FWS)
Time Limit: 6 years part-time

Management & Innovation: Management & Professional Accounting MMPA

Note: admissions have been administratively suspended.

The **Master of Management & Professional Accounting (MMPA)** program educates future leaders of the accounting profession at the master's level in management and at the professional level in accounting and related subjects. The curriculum is organized to provide an excellent understanding of:

- the challenges, functions, and needs of management;
- accounting, finance, auditing, and tax;
- essential professional subjects;
- management skills; and
- professional capabilities.

Students from any undergraduate background may apply. The MMPA is offered as a 27-month program, a 24-month advanced-standing option, and a 12-month advanced-standing option.

MMPA Program (27-Month Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Institute for Management & Innovation's additional admission requirements stated below.
- An appropriate bachelor's degree with a standing equivalent to at least a University of Toronto mid-B.
- Resumé/curriculum vitae (CV), 2 pages maximum.
- Essay, one page (500 words).
- Satisfactory Graduate Management Admission Test (GMAT) score. Note: the GMAT requirement will be waived for applicants who meet the following criteria:
  - have studied for four years at a North American university and graduated with a four-year degree, or
  - have graduated from one of the following programs: the University of Toronto Mississauga's BCom (Accounting specialist), the Rotman School's BCom (Accounting specialist), or the University of Toronto Scarborough's BBA (specialist in Management and Accounting).
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must also demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

Required Course List

Notations for all courses are indicated in parentheses following the course code and are determined as follows:

- 0 credit hours = CR/NCR (Credit/No Credit)
- 1 credit hour = one module
- 2 credit hours = two modules
- 3 credit hours = three modules

One module equals five weeks with three contact hours per week. One module equals 0.25 FCE.

Students must successfully complete **18.0 graduate full-course equivalents (FCEs)** over a 27-month period.

- MGT1090H (0) *Accounting Work-Term Course I*
- MGT1160H (1) *Communications*
- MGT1181H (1) *Introduction to Integration and Professional Decision Making*
- MGT1202H (2) *Ethics and Governance*
- MGT1210H (2) *Managerial Economics*
- MGT1211H (2) *Economic Environment of Business*
- MGT1221H (2) *Financial Accounting I*
- MGT1222H (2) *Managerial Accounting*
- MGT1241H (2) *Operations Management*
- MGT1250H (2) *Marketing*
- MGT1272H (2) *Management Information Systems*
- MGT1301H (3) *Fundamentals of Strategic Management*
- MGT1323H (3) *Auditing and Reporting*
- MGT1330H (3) *Business Finance*
- MGT1362H (3) *Managing People in Organizations*

- MGT1382H (3) *Statistics for Management*
- MGT2004H (2) *Advanced Concepts in Strategic Management*
- MGT2014H (2) *The Legal Environment of Professions and Corporations*
- MGT2090H (0) *Accounting Work-Term Course II*
- MGT2200H (1) *Government and Not-for-Profit Accounting, Reporting, and Control*
- MGT2205H (3) *Advanced Financial Accounting*
- MGT2206H (3) *Taxation I*
- MGT2207H (3) *Taxation II*
- MGT2224H (2) *Computer Auditing*
- MGT2225H (2) *Advanced Auditing Topics*
- MGT2250H (3) *Financial Reporting I*
- MGT2251H (3) *Financial Reporting II*
- MGT2260H (2) *Management Control*
- MGT2261H (2) *Financial Distress, Insolvency, and Restructuring*
- MGT2280H (2) *Accounting Theory and Research*
- MGT2281H (1) *Mergers, Acquisitions, and Valuations*
- MGT2282H (1) *Integration and Professional Decision Making Initiatives I*
- MGT2283H (1) *Integration and Professional Decision Making Initiatives II*
- MGT2284H (1) *Capstone — Integrative Board Report*
- MGT2285H (1) *Integration and Professional Decision Making Initiatives III*
- MGT2286H (1) *Integration and Professional Decision Making Initiatives IV*
- MGT2301H (2) *Financial Management*
- Plus the following elective: MGT2208H (1) *Taxation III*

Co-op work placements. Students will also complete two co-op work placements (MGT1090H and MGT2090H) in accounting or finance-related areas.

Mode of Delivery: In person
Program Length: 7 sessions full-time (typical registration sequence: S-FWS-FWS)
Time Limit: 3 years full-time

MMPA Program (24-Month Advanced-Standing Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Institute for Management & Innovation's additional admission requirements stated below.
- An appropriate bachelor's degree with a standing equivalent to at least a University of Toronto mid-B.
- Resumé/curriculum vitae (CV), 2 pages maximum.
- Essay, one page (500 words).
- Satisfactory Graduate Management Admission Test (GMAT) score. Note: the GMAT requirement will be waived for applicants who meet the following criteria:
  - have studied for four years at a North American university and graduated with a four-year degree, or
  - have graduated from one of the following programs: the University of Toronto Mississauga's BCom (Accounting specialist), the Rotman School's BCom (Accounting specialist), or the University of Toronto Scarborough's BBA (specialist in Management and Accounting).
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must also demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Applicants who have previously completed MGT1210H, MGT1211H, MGT1221H, MGT1222H, MGT1250H, and MGT1382H, or equivalent, with a grade of B- or better, may be eligible for admission to the 24-month option.

Completion Requirements

Students must successfully complete **14.75 graduate full-course equivalents (FCEs)** over a 24-month period.

- MGT1090H (0) *Accounting Work-Term Course I*
- MGT1160H (1) *Communications*
- MGT1181H (1) *Introduction to Integration and Professional Decision Making*
- MGT1202H (2) *Ethics and Governance*
- MGT1241H (2) *Operations Management*
- MGT1272H (2) *Management Information Systems*
- MGT1301H (3) *Fundamentals of Strategic Management*
- MGT1323H (3) *Auditing and Reporting*
- MGT1330H (3) *Business Finance*
- MGT1362H (3) *Managing People in Organizations*
- MGT2004H (2) *Advanced Concepts in Strategic Management*
- MGT2014H (2) *The Legal Environment of Professions and Corporations*
- MGT2090H (0) *Accounting Work-Term Course II*
- MGT2200H (1) *Government and Not-for-Profit Accounting, Reporting, and Control*
- MGT2205H (3) *Advanced Financial Accounting*
- MGT2206H (3) *Taxation I*
- MGT2207H (3) *Taxation II*
- MGT2208H (1) *Taxation III*
- MGT2224H (2) *Computer Auditing*
- MGT2225H (2) *Advanced Auditing Topics*
- MGT2250H (3) *Financial Reporting I*
- MGT2251H (3) *Financial Reporting II*
- MGT2260H (2) *Management Control*
- MGT2261H (2) *Financial Distress, Insolvency, and Restructuring*
- MGT2280H (2) *Accounting Theory and Research*
- MGT2281H (1) *Mergers, Acquisitions, and Valuations*
- MGT2282H (1) *Integration and Professional Decision Making Initiatives I*
- MGT2283H (1) *Integration and Professional Decision Making Initiatives II*
- MGT2284H (1) *Capstone — Integrative Board Report*
- MGT2285H (1) *Integration and Professional Decision Making Initiatives III*
- MGT2286H (1) *Integration and Professional Decision Making Initiatives IV*
- MGT2301H (1) *Financial Management*.

Co-op work placements. Two co-op work placements (MGT1090H and MGT2090H) in accounting or finance-related areas.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

MMPA Program (12-Month Advanced-Standing Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Institute for Management & Innovation's additional admission requirements stated below.
- An appropriate bachelor's degree with a standing equivalent to a University of Toronto B+.
- Resumé/curriculum vitae (CV), 2 pages maximum.
- Essay, one page (500 words).
- Satisfactory Graduate Management Admission Test (GMAT) score. Note: the GMAT requirement will be waived for applicants who meet the following criteria:
  - have studied for four years at a North American university and graduated with a four-year degree, or
  - have graduated from one of the following programs: the University of Toronto Mississauga's BCom (Accounting specialist), the Rotman School's BCom (Accounting specialist), or the University of Toronto Scarborough's BBA (specialist in Management and Accounting).
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must also demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Applicants from a BCom (Accounting specialist) program, with a CGPA of B+ or higher, who have previously completed MGT1210H, MGT1211H, MGT1221H, MGT1222H, MGT1272H, MGT1323H, MGT1330H, MGT1382H, MGT2014H, MGT2205H, MGT2206H, MGT2207H, MGT2224H, MGT2225H, MGT2250H, MGT2251H, MGT2260H, MGT2261H, and MGT2301H, or equivalent, with a grade of B- or better, may be eligible for admission to the 12-month option.
- Applicants to the 12-month option must have completed the courses listed while in a program accredited by the Chartered Professional Accountants of Canada.

Completion Requirements

Students must successfully complete **6.5 graduate full-course equivalents (FCEs)** over a 12-month period:

- MGT1160H (1) *Communications*
- MGT1181H (1) *Introduction to Integration and Professional Decision Making*
- MGT1202H (2) *Ethics and Governance*
- MGT1241H (1) *Operations Management*
- MGT1250H (1) *Marketing*
- MGT1301H (3) *Fundamentals of Strategic Management*
- MGT1362H (3) *Managing People in Organizations*
- MGT2004H (2) *Advanced Concepts in Strategic Management*
- MGT2090H (0) *Accounting Work-Term Course II*
- MGT2200H (1) *Government and Not-for-Profit Accounting, Reporting, and Control*
- MGT2208H (1) *Taxation III*
- MGT2280H (2) *Accounting Theory and Research*
- MGT2281H (1) *Mergers, Acquisitions, and Valuations*
- MGT2282H (1) *Integration and Professional Decision Making Initiatives I*
- MGT2283H (1) *Integration and Professional Decision Making Initiatives II*
- MGT2284H (1) *Capstone — Integrative Board Report*
- MGT2285H (1) *Integration and Professional Decision Making Initiatives III*
- MGT2286H (1) *Integration and Professional Decision Making Initiatives IV*.

Co-op work placement. One co-op work placement (MGT2090H) in accounting or finance-related areas taken in the Winter session.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

Management & Innovation: Management of Innovation MMI

The **Master of Management of Innovation (MMI) program** is designed for students with a background in science and engineering. It is an accelerated 12-month professional degree for individuals pursuing management careers in technology-focused organizations. The MMI curriculum provides a strong foundation in economic analysis, technology management, business strategy, finance, accounting, marketing, and policy. The required academic nine core courses focus on management and economics, and students select three electives tailored to their interests and goals. A four-month mandatory internship requirement allows students to gain valuable, real-world work experience and an opportunity to demonstrate the key competencies they learn in the MMI program.

The program is a full-time, course-based master's degree that starts in September each year.

Master of Management of Innovation

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Institute for Management & Innovation's additional admission requirements stated below.

- Bachelor's degree in sciences or engineering or equivalent from a recognized university. Minimum overall average grade of B+ over the last two years of full-time academic study.
- Although not a formal requirement, the MMI program recommends that applicants take a statistics or calculus course in their undergraduate studies.
- Resumé/curriculum vitae (CV), two pages maximum.
- Letter of intent outlining the applicant's interest in Management and Innovation, one page (500 words).
- Two academic letters of reference must be submitted by the applicant (or at least one academic and one professional reference). One reference must be provided directly from a faculty member familiar with the applicant's work and who holds an appointment in the program where the applicant most recently graduated.
- Applicants who obtained a degree outside North America must submit a competitive GMAT or GRE (General) examination result to be sent to the department.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must also demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Attend an interview where fit, problem-solving capabilities, and communication skills are assessed.

Completion Requirements

Students must complete **6.5 graduate full-course equivalents (FCEs)** over a 12-month period.

The 12-month program consists of an intensive 8-month core academic curriculum followed by a 4-month internship:

- **Coursework**. 6.0 FCEs as follows:
  - 4.5 FCEs in required courses:
    - MMI1010H *Prices and Markets*
    - MMI1020H *Introduction to Big Data Analysis*
    - MMI1030H *Marketing Science*
    - MMI1040H *Accounting*
    - MMI1050H *Negotiations*
    - MMI1060H *Finance*
    - MMI1070H *Economics of Business Strategy*
    - MMI1080H *Management of Technology*
    - MMI1090H *Technology, Strategy, and Policy*.
  - 1.5 FCEs in electives (0.5 FCE in the Fall session and 1.0 FCE in the Winter session)
- **Internship**: MMI1100H *MMI Internship*.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

Management & Innovation: Sustainability Management MScSM

The **Master of Science in Sustainability Management (MScSM)** is an interdisciplinary, course-based professional program. The program provides education that integrates knowledge from management, social, and natural sciences to address sustainability issues. The MScSM provides a strong foundation in sustainability management while offering an opportunity to specialize in a management or science concentration. The program is designed for students from diverse educational backgrounds such as management, social science, natural science, and engineering. The program was developed in consultation with leaders and prospective employers in business, non-profit, research, and government organizations.

Management & Innovation: Sustainability Management MScSM; Concentration: Management

MScSM; Concentration: Management

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Institute for Management & Innovation's additional admission requirements stated below.
- An appropriate undergraduate degree from a recognized university in any area of natural science, environmental science, social science, management, and engineering with a standing equivalent to at least a mid-B in the final year of the program.
- Successful completion of an undergraduate statistics or mathematics course (0.5 full-course equivalent [FCE] or equivalent).
- Resumé/curriculum vitae (CV).
- Letter of intent outlining the applicant's interest in sustainability issues (750 words).

Completion Requirements

Students must complete **9.5 graduate full-course equivalents (FCEs)** over a 2-year period:

- **Coursework**. 9.0 FCEs as follows:
  - 6.5 FCEs including:
    - SSM1090H *Capstone Course* and
    - SSM1100Y *Research Paper I* or SSM1101Y *Research Paper II*
  - 2.5 FCEs in elective courses selected by chosen concentration as follows:
    - 2.0 FCEs from the Management elective courses
    - 0.5 FCE from the Science elective courses.
- **Internship**. SSM1110H *Sustainability Management Internship*.

Program Path

Year 1: Fall

- SSM1010Y *Principles of Sustainability Management*
- SSM1020H *Decision Making for Sustainability Management*

- SSM1050H *Ecosystem Science*
- SSM1060H *Managing Sustainable Organizations*

Year 1: Winter

- SSM1030H *Environmental Science*
- SSM1040H *Managerial Economics for Sustainability Management*
- SSM1070H *Sustainability Law and Policy*
- SSM1080H *Strategies for Sustainability Management*
- SSM1120H *Social Dimensions of Sustainability*

Year 1: Summer

- SSM1110H *Sustainability Management Internship*

Year 2: Fall

- SSM1100Y *Research Paper I* or SSM1101Y *Research Paper II*
- Plus 1.5 FCE elective

Year 2: Winter

- SSM1090H *Capstone Course — Sustainable Enterprise*
- SSM1100Y *Research Paper I* or SSM1101Y *Research Paper II*
- Plus 1.0 FCE elective

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW)
Time Limit: 3 years full-time

Management & Innovation: Sustainability Management MScSM; Concentration: Science

MScSM; Concentration: Science

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Institute for Management & Innovation's additional admission requirements stated below.
- An appropriate undergraduate degree from a recognized university in any area of natural science, environmental science, social science, management, and engineering with a standing equivalent to at least a mid-B in the final year of the program.
- Successful completion of an undergraduate statistics or mathematics course (0.5 full-course equivalent [FCE] or equivalent).
- Resumé/curriculum vitae (CV).
- Letter of intent outlining the applicant's interest in sustainability issues (750 words).

Completion Requirements

Students must complete **9.5 graduate full-course equivalents (FCEs)** over a 2-year period:

- **Coursework**. 9.0 FCEs as follows:
  - 6.5 FCEs including:
    - SSM1090H *Capstone Course* and
    - SSM1100Y *Research Paper I* or SSM1101Y *Research Paper II*
  - 2.5 FCEs in elective courses selected by chosen concentration as follows:
    - 2.0 FCEs from the Science elective courses
    - 0.5 FCE from the Management elective courses.
- **Internship**. SSM1110H *Sustainability Management Internship.*

Program Path

Year 1: Fall

- SSM1010Y *Principles of Sustainability Management*
- SSM1020H *Decision Making for Sustainability Management*
- SSM1050H *Ecosystem Science*
- SSM1060H *Managing Sustainable Organizations*

Year 1: Winter

- SSM1030H *Environmental Science*
- SSM1040H *Managerial Economics for Sustainability Management*
- SSM1070H *Sustainability Law and Policy*
- SSM1080H *Strategies for Sustainability Management*
- SSM1120H *Social Dimensions of Sustainability*

Year 1: Summer

- SSM1110H *Sustainability Management Internship*

Year 2: Fall

- SSM1100Y *Research Paper I* or SSM1101Y *Research Paper II*
- Plus 1.5 FCE elective

Year 2: Winter

- SSM1090H *Capstone Course — Sustainable Enterprise*
- SSM1100Y *Research Paper I* or SSM1101Y *Research Paper II*
- Plus 1.0 FCE elective

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW)
Time Limit: 3 years full-time

Management & Innovation: Urban Innovation MUI

The **Master of Urban Innovation (MUI)** is a full-time, professional program that encompasses studies in urban economic development, community capacity building, innovation management, local and regional governance, urban sustainability, and real estate development for innovation. The MUI complements the suite of programs in management, innovation, and sustainability currently offered in the Institute for Management & Innovation and builds on the strengths of other key academic units at UTM, including the Departments of Geography, Geomatics and Environment; Economics; Political Science; and the Institute of Communication, Culture, Information and Technology.

Job opportunities for professionals trained in the fields of urban economic development and innovation through a cross-disciplinary approach are growing. MUI students gain the analytical tools that enable them to produce effective economic development policies and plans, including a detailed knowledge of strategic management techniques, the role of real estate markets in local economic development, and critical tools for financial analysis.

Master of Urban Innovation

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Institute for Management & Innovation's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university in social sciences, management/commerce, or a related field such as architecture or civil engineering, with a standing equivalent to a mid-B in the final year of the program.
- Successful completion of 0.5 full-course equivalent (FCE) in an undergraduate statistics course.
- Letter of intent.
- Three letters of reference.
- A writing sample.
- Resumé.

Completion Requirements

Students must successfully complete **9.5 graduate full-course equivalents (FCEs)** over a 20-month period:

- **Coursework.** 9.0 FCEs as follows:
  - 4.5 FCEs in core courses:
    - MUI1010H *Introduction to Management of Urban Innovation*
    - MUI1020H *Civic Engagement and Economic Development*
    - MUI1030H *Urban and Regional Economic Development Theory*
    - MUI1040H *Socially Sustainable Cities: Theory, Policy, and Practice*
    - MUI1050H *Urban Politics*
    - MUI1060H *Local and Regional Government: Management and Policymaking*
    - MUI1075H *Digital Cities*
    - MUI1080H *Economic Development Planning*
    - MUI1090H *Technology, Strategy, Policy*
  - 3.5 FCEs in electives
  - MUI2095Y *Capstone Course*
- **Internship.** MUI1100H *Summer Internship*.

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW)
Time Limit: 3 years full-time

Management & Innovation: IMI Elective Courses

Institute for Management & Innovation

The following courses may be taken as electives by students enrolled in any U of T graduate program.

Course Code	Course Title
IMI1001H	Innovation and Entrepreneurship
IMI1002H	Social Entrepreneurship: Global Alternatives to Neo-Liberal Economics
IMI1003H	Independent Study
IMI2001H	Special Topics in Management and Innovation
IMI2002H	Leadership for a Sustainable Future
IMI2003H	Project Management: Practice and Tools
IMI2990H	Special Topics in Management and Innovation I
IMI2995H	Special Topics in Management and Innovation II
IMI3001H	Biocommercialization I
IMI3002H	Change Management
IMI3003H	Biocommercialization II

Management & Innovation: Management of Innovation MMI Courses

Required Core Courses

Course Code	Course Title
MMI1010H	Prices and Markets
MMI1020H	Introduction to Big Data Analysis
MMI1030H	Marketing Science

Course Code	Course Title
MMI1040H	Accounting
MMI1050H	Negotiations
MMI1060H	Finance
MMI1070H	Economics of Business Strategy
MMI1080H	Management of Technology
MMI1090H	Technology, Strategy, and Policy
MMI1100H	MMI Internship

Elective Courses

Course Code	Course Title
MMI2000H	Product Management by Design

MMI students are encouraged to select electives that allow them to focus on their individual areas of interest. Students are free to choose from all graduate courses across all disciplines at the University of Toronto including the MMI elective and IMI electives. All selections are subject to approval in advance by the Program Director.

Management & Innovation: Sustainability Management MScSM Courses

Required Courses

Course Code	Course Title
SSM1010Y	Principles of Sustainability Management
SSM1020H	Decision Making for Sustainability Management
SSM1030H	Environmental Science
SSM1040H	Managerial Economics for Sustainability Management
SSM1050H	Ecosystem Science
SSM1060H	Managing Sustainable Organizations
SSM1070H	Sustainability Law and Policy
SSM1080H	Strategies for Sustainability Management
SSM1090H	Capstone Course — Sustainable Enterprise
SSM1100Y or SSM1101Y	Research Paper I or Research Paper II
SSM1120H	Social Dimensions of Sustainability

Elective Courses

MScSM students can take any of the following courses as part of fulfilling the program's elective requirement. Students can also select sustainability-related courses at the University of Toronto or at Exchange Universities, as well as IMI electives. Course selections need to be approved in advance by the Program Director.

Science Electives

Course Code	Course Title
SSM2030H	Advanced Sustainability Management
SSM2050H	Special Topics in Sustainability

Management Electives

Course Code	Course Title
SSM2010H	Marketing in Sustainability Management
SSM2020H	Sustainability Ethics
SSM2040H	Applied Sustainability Management
SSM2050H	Special Topics in Sustainability

Management & Innovation: Urban Innovation MUI Courses

Required Core Courses

Course Code	Course Title
MUI1010H	Introduction to Management of Urban Innovation
MUI1020H	Civic Engagement and Economic Development
MUI1030H	Urban and Regional Economic Development Theory
MUI1040H	Socially Sustainable Cities: Theory, Policy, and Practice
MUI1050H	Urban Politics
MUI1060H	Local and Regional Government: Management and Policymaking
MUI1075H	Digital Cities
MUI1080H	Economic Development Planning
MUI1090H	Technology, Strategy, Policy
MUI1100H	Summer Internship

Course Code	Course Title
MUI2095Y	Capstone Course

Elective Courses

MUI students can take any of the following courses as part of fulfilling the program's elective requirement. Students can also select other electives at the University of Toronto, including IMI elective courses, that will align with their career goals and interests. All selections are subject to approval by the Program Director. It is recommended that students consult with the program on their elective course options during Year 1. Available course offerings are subject to change.

Course Code	Course Title
MUI2000H	Special Topics in Urban Innovation
MUI2010H	Sectoral Analysis
MUI2020H	Microeconomics of Competitiveness
MUI2030H	Planning for Jobs: Labour Market Transformations and Employment in 21st Century Cities
MUI2040H	Real Estate Development
MUI2050H	The Economics of Cities and Regions: Productivity, Technology, and Jobs
MUI2055H	Cities, Industry, and the Environment
MUI2060H	Comparative Urban Politics
MUI2070H	Planning and Governing the Metropolis
MUI2080H	Intelligent Communities/Smart Cities
MUI2090H	Public Finance in Canadian Cities
SSM2010H	Marketing in Sustainability Management
SSM2020H	Sustainability Ethics
SSM2030H	Advanced Sustainability Management
SSM2040H	Applied Sustainability Management

Management, Rotman School of Management

Management, Rotman School: Introduction

Faculty Affiliation

Management, Rotman School of Management

Degree Programs

Management

MBA

- Full-Time Master of Business Administration;
  - Emphases (full-time and extended full-time MBA):
    - Data Analytics and Modeling;
    - Finance;
    - Global Management;
    - Health Sector Management;
    - Innovation, Entrepreneurship, and Business Design;
    - Leadership;
    - Marketing;
    - Real Estate;
    - Strategy;
    - Sustainability and Society
- Extended Full-Time Master of Business Administration (Morning/Evening) (note: effective April 21, 2025, admissions to the morning section have been administratively suspended);
- Executive Master of Business Administration
  - Fields:
    - Global Executive Master of Business Administration (GEMBA): the GEMBA is a field that is only offered as part of the dual degree
      - ❖ Dual Degree Program: Global Executive Master of Business Administration (University of Toronto) / Global Executive Master of Business Administration (Universita Commerciale Luigi Bocconi)
    - Global Executive Master of Business Administration for Healthcare and the Life Sciences (GEMBA-HLS)

Finance

MF (note: effective April 21, 2025, admissions have been administratively suspended)

Financial Risk Management

MFRM

Management Analytics

MMA

Combined Degree Programs

- Medicine, Doctor of / Management, Full-Time Option, MBA
- STG, Engineering, BASc / Management, MBA
- STG, Law, Juris Doctor / Management, MBA
- STG, Management, MBA / MGA
- STG, Pharmacy, Doctor of / Management, MBA

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Contemporary East and Southeast Asian Studies**
  - Management, MBA
- **Environmental Studies**
  - Management, MBA

Diploma Programs

Professional Accounting

GDipPA

Overview

The Rotman School of Management is a catalyst for transformative learning, insights, and public engagement, bringing together diverse views and initiatives around a defining purpose: to create value for business and society.

The School is located in Canada’s financial, commercial, and cultural capital, and students are trained just blocks from Bay Street, Canada’s business centre. The School takes full advantage of its strategic location by drawing on a rich pool of business leaders as teachers, mentors, and speakers. The School's strong academic reputation and close ties to the business community give graduates an edge in their search for a fulfilling career.

In the classroom, top-ranked faculty provide access to the latest research before it filters into consulting firms and major corporations. Learning at Rotman goes deep — combining a rigorous, model-based approach to decision making with a strong emphasis on personal development. The School attracts people from a wide range of countries and backgrounds and provides them with a learning environment that is safe, welcoming, open, inclusive, and respectful to all.

Contact and Address

Rotman School of Management

Web

General
Full-Time MBA
Morning/Evening MBA
Executive MBA
Global Executive MBA
Global Executive MBA for Healthcare and the Life Sciences
Master of Finance
Master of Financial Risk Management
Master of Management Analytics
Graduate Diploma in Professional Accounting

Telephone

MBA: (416) 946-8463
Morning/Evening MBA: (416) 946-5916
Executive MBA: (416) 946-3022
Global Executive MBA: (416) 946-3022
Global Executive MBA for Healthcare and the Life Sciences: (416) 946-3638
Master of Finance: (416) 978-4329
Master of Financial Risk Management: (416) 978-6280
Master of Management Analytics: (416) 978-3525
Graduate Diploma in Professional Accounting: (416) 978-4329

Address

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Management, Rotman School: Graduate Faculty

Full Members

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Agrawal, Ajay - BASc, MEng, MBA, PhD
Amernic, Joel - BSc, MBA, CA
Anastakis, Dimitry - PhD
Bar-Isaac, Heski - BA, MSc, PhD
Baron, Opher - BSc, MBA, PhD
Baum-Snow, Nathaniel - AB, PhD
Baum, Joel - BA, MBA, PhD
Blum, Bernardo - BA, MA, MA, PhD
Booth, Laurence - BSc, MA, MBA, DBA
Bova, Francesco - BComm, MA, MBA, MPH, PhD
Bryan, Kevin - BA, MS, MS, PhD
Callen, Jeffrey - BM, MBA, DPhil
Casciaro, Tiziana - BA, MS, PhD
Célérier, Claire - MSc, PhD
Cheng, Ing-Haw - MEc ***(Academic Director, Master of Financial Risk Management Program)***
Christianson, Marlys - MD, PhD
Christoffersen, Susan - BA, MA, PhD ***(Dean)***
Corts, Kenneth - BA, MA, PhD ***(Vice-Dean, Research, Strategy, and Resources)***
Côté, Stéphane - BSc, MA, PhD ***(Director, Faculty Recruiting)***
Cunningham, William - BA, MPH, MS, MA, PhD
Dart, Beatrix - MEc, MISt, PhD ***(Academic Director, Experiential and Global Learning)***
Davydenko, Sergei - MA, MSc, PhD ***(Academic Director, Master of Finance Program)***
DeCelles, Katherine - BS, PhD ***(Academic Director, PhD Program)***
Doering, Laura - BA, MA, MA, PhD
Doidge, Craig Andrew - BComm, MSc, PhD ***(Vice-Dean, Faculty)***
Dyck, Alexander - BA, PhD
Edwards, Alexander - BAC, MAcct, MS, PhD
Elitzur, Ramy - BA, MBA, PHM, PhD
Elkamhi, Redouane - BE, MBA, PhD
Feinberg, Matthew - BA, MEd, PhD
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Gans, Joshua - BEc, PhD
Golden, Brian - BS, MS, PhD ***(Academic Director, Global Executive MBA for Healthcare and the Life Sciences Programs)***
Goldfarb, Avi - BA, MA, PhD
Goldreich, David - BS, MS, MS, PhD
Golubov, Andrey - MSc, PhD
Gomez, Rafael - BA, MA, MIR, PhD
Hadfield, Gillian - BA, JD, PhD, Schwartz Reisman Chair in Technology and Society
Han, Bing - PhD
Han, Lu - BA, MA, PhD
Hawkins, Scott - BA, MS, PhD
Hejazi, Walid - BA, MA, PhD ***(Academic Director, Executive Programs)***
Hoffman, Mitchell - BA, PhD
Hope, Ole-Kristian - MBA, PhD
Hu, Ming - BS, MS, PhD
Hull, John - BA, MA, MA, PhD
Kan, Raymond - BBA, MBA, DPhil
Kaplan, Sarah - BA, MA, PhD
Krashinsky, Harry - MA, PhD
Krass, Dmitry - BS, MEng, PhD
Latham, Gary - BA, MS, PhD
Lederman, Mara - BA, PhD
Lee, Byung Soo - BS, MA, PhD
Lee, Spike - MS, PhD
Leonardelli, Geoffrey - BA, MA, PhD
Liao, Scott - MA, PhD ***(Vice-Dean, Undergraduate and Specialized Programs)***
Lu, Hai - MBA, PhD, PhD
Mahrt-Smith, Jan - BSc, PhD ***(Academic Director, Global Executive MBA Program)***
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McEvily, Bill - BS, PhD
McGahan, Anita - BA, MA, MBA, PhD
Mehta, Nitin - BTech, MS, MS, PhD
Milner, Joseph - BSc, MS, PhD ***(Vice-Dean, MBA Programs)***
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Mohanram, Partha Sarathy - BTech, MBA, PhD
Moldoveanu, Mihnea - BSc, MSc, DBA
Moorthy, Sridhar - BSc, MBA, MS, PhD
Ornthanalai, Chay - BEng, PhD
Reuber, Becky - BA, MSc, PhD
Richardson, Gordon - BA, MBA, PhD, CA
Romero, Gonzalo - BS, BS, PhD

Rotenberg, Wendy - BA, MBA, PhD
Rotundo, Maria - BA, MA, PhD
Rowley, Timothy - BA, MBA, PhD ***(Academic Director, Morning and Evening MBA; Executive MBA Programs)***
Silverman, Brian - AB, MA, SM, PhD
Simutin, Mikhail - BA, PhD
Smieliauskas, Waldemar - BS, MS, PhD
Soberman, David - BSc, MBA, PhD
Soman, Dilip - BE, MBA, PhD
Strange, William - BA, MA, PhD
Tilcsik, András - AB, AM, PhD
Trefler, Daniel - BA, MPH, PhD
Tsai, Claire - BBA, MBA, PhD ***(Academic Director, Full-Time MBA Program)***
Wang, Kevin - BS, MA, PhD
Webb, Ryan - BA, MA, PhD
Whyte, Glen - LLB, MA, MBA, MPH, PhD
Wong, Franco - BA, MA, PhD
Xie, Jia Lin - BA, MBA, PhD
Xin, Baohua - PhD
Yang, Liyan - BA, MA, PhD
Zhang, Ping - BA, MA, MAcct, PhD
Zhong, Chenbo - BA, MA, PhD

Members Emeriti

Amburgey, Terry - BS, MA, PhD
Beatty, David - BA, MA
Berman, Oded - BA, PhD
Brean, Donald J.S. - BA, MBA, MSc, PhD
Calder, Brendan - BM
Dobson, Wendy - BScN, MPA, SM, PhD
Dungan, D Peter - BA, MA, PhD
Dunne, David - BComm, DPhil
Fisher, James - BA, MBA
Fleck, James - BA, DBA
Halpern, Paul - BCom, MBA, PhD
Horstmann, Ignatius - BA, PhD
Hyatt, Douglas - BA, MA, PhD
Kirzner, Eric - BA, MBA
Kolodny, Harvey - BEng, MBA, PhD
Losell, Donna - BA, MBA
Martin, Roger - AB, MBA
Menzefricke, Ulrich - MBA, DBA
Mitchell, Andrew - BA, PhD
Ondrack, Daniel - BComm, MBA, PhD
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Reed, Connie - BA, MBA
Ryall, Michael - BS, MBA, PhD
Verma, Anil - BTech, MBA, PhD
White, Alan - BEng, MBA, PhD
Wilson, Thomas - BA, AM, PhD

Associate Members

Akchurina, Dinara - MA
Ashraf, Nouman - BCom, MBA
Barjesteh, Nasser - BS, MCS, MS, PhD
Barrette, Catherine - BCom, BCom ***(Director, Rotman Commerce Program)***
Blundell, Richard - BSc, MBA
Boyko, Dana Marta - BA, MA
Carr, Melanie - MD
Catapano, Rhia - BS, PhD
Corhay, Alexandre - BCom, MSc, PhD
Dimitriadis, Stefan - BA, AM, MPH, PhD
Djikic, Maja - PhD
Douglas, Scott - BCom
Duke, Kristen - BA, PhD
Geoffrey, Craig - BA, MBA
Gopalakrishna, Goutham - DSc
Inostroza Padilla, Nicolas - BS, MA, MA, PhD
Jiang, Hansheng - BM, DPhil
Khan, Michael - BCom
Kim, Daehyun - PhD
Kim, Yongah - MBA
Knight, Samsun - DSc
Kwan, Amy - BSc
Lee, Hyeun Jung - MBA
Liu, Shannon - BS, BA, PhD
Liu, Sheng - BS, PhD
MacKay, Alexandra - BSc, MA, PhD
Manning, Ryann - BA, MA, PhD
McCullough, Tom - MBA
Motut, Alexandra Joan - AB, MA, DPhil
Newman, George - BPhil, MPH, PhD
Odziemkowska, Katarzyna - MFS
Oesch, John - BS, MSc, MBA, MEd, PhD
Palancz, Eszter - MA
Park, Sae-Seul - BBA, MISt
Powers, Richard - BPHE, BA, LLB, MBA
Reiter, Nayana - BBA, MSc, PhD
Roshanaei, Vahid - DE
Rutherford, Scott - BSc, MBA
Ruttan, Rachel - BA, MS, PhD
Schneider, Manfred - BCom, JD, MBA, CA, CPA
Seibel, Regina - MEc
Sekar, Shreyas - BA, PhD
Shin, Jee-Eun - BA, MS
Stapleton, Maureen - MBA
Stojanovic, Dragan - BComm, MEd
Tan, Eugene - BS, BS, PhD
Tassone, Ralph - BCom, MEd
Tolias, Fotini - BCom, MBA
Trippen, Gerhard - MCS, PhD ***(Academic Director, Master of Management Analytics Program)***
Xu, Ting - MEc
Yi, Irene - BBA, PhD
Zhong, Zachary - PhD
Zuliani, Elisa - BBM, CA ***(Academic Director, Graduate Diploma in Professional Accounting Program)***

Management, Rotman School: Management Full-Time and Extended Full-Time MBA

The **Full-Time Rotman MBA** is an intense program that combines 16 months of academic study with a 4-month opportunity for a paid internship. The program begins with a core curriculum that introduces Rotman's unique problem-solving and creative methodology with the fundamental disciplines of business. Students have the opportunity to customize their MBA experience by choosing to complete an emphasis in one of 10 areas, develop a broader skill set with over 90 elective courses, and accelerate their career through the experiential learning component of the Flexible Internship program. As the practice of management evolves over time, so do the elective courses and areas that Rotman offers in any given year.

Students are required to complete the course *Applied Management: Placement* in conjunction with a work placement which may be done in the Summer, Fall, or Winter sessions.

Depending on their academic area of study and career objectives, students will be guided on the best work term option to secure a placement with an employer. Throughout their work placement, students will benefit from enhanced communication with their host employers, tracking of project deliverables, and feedback from faculty supervisors.

Rotman offers three core strategic areas — an innovative curriculum, tailored career services, and the Self-Development Lab — to develop the skills and experiences students need to accelerate in their careers as high-value decision makers and business leaders. Whether their aim is to make a career switch, accelerate their current career, or start their own business, the Rotman MBA enables students to reach their professional and personal goals.

The **Extended Full-Time (Morning/Evening) Rotman MBA programs** are designed for working professionals in the Greater Toronto Area. The 32-month, cohort-based format allows working professionals to continue working while studying for their MBA. Students may explore new directions, expand leadership skills, and build close ties with a lifelong network. There are two program options:

- The Morning MBA allows working professionals to complete their master's before work — from 7:00 to 9:00 am, two mornings a week.
- The Evening MBA allows students to get a fresh perspective on real-world challenges from globally renowned faculty after work — from 6:30 to 8:30 pm, two evenings a week.

In the second half of the MBA program, students have the choice to specialize in a career path with a range of electives, including those taught during regular working hours.

Note: effective April 21, 2025, admissions to the Morning MBA have been administratively suspended.

Full-Time MBA Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Rotman School's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university.
- Applicants must obtain a satisfactory score on the Graduate Management Admissions Test (GMAT) or the Graduate Record Examination (GRE; General Test). Test results are valid for five years.
- If required, completion of the following English proficiency tests:
  - Test of English as a Foreign Language (TOEFL) Internet-based format: overall score of 100 with a minimum of 22 on the writing and speaking sections.
  - International English Language Testing System (IELTS) Academic: score of 7.0 with minimum 6.5 required for each component.
- A minimum of two years of full-time work experience is strongly recommended.
- Two professional references.
- The Full-Time MBA program starts annually in August. Applicants for the Full-Time program are encouraged to apply as per the deadline dates (beginning in October with a final deadline in May).
- Exemptions from the GMAT and GRE requirement are granted to applicants who have:
  - Passed at least the Level II examination of the Chartered Financial Analyst (CFA) designation, or equivalent designations in other jurisdictions at the discretion of the Academic Director;
  - Passed the Common Final Exam (CFE) (or former UFE) for a Certified Professional Accountant (CPA) designation, or equivalent designations in other jurisdictions at the discretion of the Academic Director;
  - Attained the professional designation in Engineering (PEng) or in Actuarial Sciences (ACIA or FCIA), or equivalent designations in other jurisdictions at the discretion of the Academic Director;
  - Graduated from their University of Toronto first-entry undergraduate degree program with high distinction, with a cumulative grade point average of 3.5 or higher.

Completion Requirements

- Within this 20-month program (two academic years), students must successfully complete a total of **11.3 full-course equivalents (FCEs)** as follows:
  - Students must complete a structured sequence of required courses at the 1000 level. Each course has a weighting of one, two, or three modules. Three-module courses are equivalent to three credit hours. No advanced standing will be granted for previous academic work completed or professional designations earned. Students who are unable to follow courses in their prescribed order must attain special approval from the Academic Director in order to continue in the program.
  - **Required courses**:
    - RSM1160H *Business Ethics*
    - RSM1165H *Leveraging Diverse Teams*
    - RSM1201H *Foundations of Strategic Management*
    - RSM1210H *Managerial Economics*
    - RSM1211H *Economic Environment of Business*
    - RSM1215H *Decision Making with Models and Data*
    - RSM1220H *Financial Accounting and Reporting: A Global Perspective*
    - RSM1222H *Managerial Accounting*
    - RSM1231H *Finance I: Global Markets and Valuation*
    - RSM1232H *Finance II: Corporate Finance*
    - RSM1240H *Operations Management*
    - RSM1250H *Managing Customer Value*
    - RSM1260H *Leading People in Organizations*
    - RSM1282H *Statistics for Management*
    - RSM1380H *Applied Management: Placement* **or** RSM1381H *Applied Management: Independent Study*

    - Complete 0.5 FCE:
        - A full-time internship work placement and RSM1380H *Applied Management: Placement*, which includes in-class lectures and coursework assessments; **or**
        - If they are not taking an internship, RSM1381H *Applied Management: Independent Study*.
- Complete **6.5 elective FCEs at the 2000 level** (equivalent to thirteen 2000-level courses).
- With the permission of the Academic Director, Full-Time MBA Program, students may take up to five 2000-level courses from another graduate unit or participate in an international exchange program approved by the Rotman School of Management or the University of Toronto. In all cases, courses selected are subject to the approval of the Academic Director, Full-Time MBA Program.
- Students can take two experiential courses, as designated by a course number RSM27XX, for credit (1.0 FCE). For students who take more than two experiential courses, these would not be counted towards the MBA degree requirements. Students should be aware that the following restrictions apply:
    - Students can only take RSM2709H *Global Practicum* for credit one time.
    - Students can only take one from the following for credit: RSM2702H or RSM2703H.
    - Students in combined degree programs with other schools or Faculties at the University of Toronto can take one experiential course for credit (0.5 FCE), unless exemption is granted.
    - Students taking part in an exchange with one of the partner schools for four half credits or more cannot take the experiential learning courses for credit. Students taking part in an exchange with one of the partner schools for three half credits or less can take one experiential learning course (0.5 FCE) for credit.
- Students have the option of completing an emphasis in Data Analytics and Modeling; Finance; Global Management; Health Sector Management; Innovation, Entrepreneurship, and Business Design; Leadership; Marketing; Real Estate; Strategy; or Sustainability and Society as part of their degree program.
    - An emphasis is an identified set and sequence of courses that is completed on an optional basis in partial fulfillment of the requirements for the MBA degree. Emphases will be noted on the student official University transcript and, as such, will be useful for signalling skills and knowledge to potential employers. They will also provide guidance to upper-year students on the courses that define a particular discipline, as well as a community of study for those students taking several courses together. Please see details in the Emphases section.

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW)
Time Limit: 3 years full-time

Extended Full-Time MBA Program (Morning/Evening)

Minimum Admission Requirements

- Applicants are considered under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Rotman School's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university.
- Applicants must obtain a satisfactory score on the Graduate Management Admissions Test (GMAT) or the Graduate Record Examination (GRE; General Test).
- A minimum of two years of full-time work experience.
- Two professional references.
- Resumé.
- Essays.
- Interview.
- If required, completion of the following English proficiency tests:
    - Test of English as a Foreign Language (TOEFL) Internet-based format: overall score of 100 with a minimum of 22 on the writing and speaking sections.
    - International English Language Testing System (IELTS) Academic: score of 7.0 with minimum 6.5 required for each component.
- The Extended Full-Time (Morning/Evening) MBA programs start annually in August. Applicants are encouraged to apply as per the deadline dates (beginning in the fall with a final deadline in June). Applicants who meet all of the criteria will be assessed by the admissions committee on the basis of grades, standardized test scores, references, essays, professional experience, and a personal interview.
- Exemptions from the GMAT and GRE requirement are granted to applicants who have:
    - Passed at least the Level II examination of the Chartered Financial Analyst (CFA) designation, or equivalent designations in other jurisdictions at the discretion of the Academic Director;
    - Passed the Common Final Exam (CFE) (or former UFE) for a Certified Professional Accountant (CPA) designation, or equivalent designations in other jurisdictions at the discretion of the Academic Director;
    - Attained the professional designation in Engineering (PEng) or in Actuarial Sciences (ACIA or FCIA), or equivalent designations in other jurisdictions at the discretion of the Academic Director;
    - Graduated from their University of Toronto first-entry undergraduate degree program with high distinction, with a cumulative grade point average of 3.5 or higher.

Completion Requirements

- This program, designed for working professionals, covers the equivalent of two academic years delivered over a 32-month period.
- Students complete requirements through either the Morning or Evening program options.

- **Coursework**: students must complete required and elective courses as follows:
  - **Required**: students must complete a structured sequence of required courses at the 1000 level. Each course has a weighting of one, two, or three modules. Three-module courses are equivalent to three credit hours. No advanced standing will be granted for previous academic work completed or professional designations earned. Students who are unable to follow courses in their prescribed order must attain special approval from the Academic Director in order to continue in the program.
    - RSM1160H *Business Ethics*
    - RSM1165H *Leveraging Diverse Teams*
    - RSM1201H *Foundations of Strategic Management*
    - RSM1210H *Managerial Economics*
    - RSM1211H *Economic Environment of Business*
    - RSM1215H *Decision Making with Models and Data*
    - RSM1220H *Financial Accounting and Reporting: A Global Perspective*
    - RSM1222H *Managerial Accounting*
    - RSM1231H *Finance I: Global Markets and Valuation*
    - RSM1232H *Finance II: Corporate Finance*
    - RSM1240H *Operations Management*
    - RSM1250H *Managing Customer Value*
    - RSM1260H *Leading People in Organizations*
    - RSM1282H *Statistics for Management*
    - RSM2622H *Leadership Development Lab*
  - **Elective**: 5.0 full-course equivalents (FCEs) at the 2000 level (equivalent to ten 2000-level courses).
- With the permission of the Academic Director, Morning/Evening MBA programs, students may take up to four 2000-level courses from another graduate unit or participate in an international exchange program approved by the Rotman School of Management or the University of Toronto. In all cases, courses selected are subject to the approval of the Academic Director, Morning/Evening MBA programs.
- Students can take two experiential courses, as designated by a course number RSM27XX, for credit (1.0 FCE). For students who take more than two experiential courses, these would not be counted towards the MBA degree requirements. Students should be aware that the following restrictions apply:
  - Students can only take RSM2709H *Global Practicum* for credit one time.
  - Students can only take one from the following for credit: RSM2702H or RSM2703H.
  - Students taking part in an exchange with one of the partner schools for four half credits or more cannot take the experiential learning courses for credit. Students taking part in an exchange with one of the partner schools for three half credits or less can take one experiential learning course (0.5 FCE) for credit.
- Students are not eligible to take a combined degree program.
- Students have the option of completing an emphasis in Data Analytics and Modeling; Finance; Global Management; Health Sector Management; Innovation, Entrepreneurship, and Business Design; Leadership; Marketing; Real Estate; Strategy; or Sustainability and Society as part of their degree program.
  - An emphasis is an identified set and sequence of courses that is completed on an optional basis in partial fulfillment of the requirements for the MBA degree. Emphases will be noted on the student official University transcript and, as such, will be useful for signalling skills and knowledge to potential employers. They will also provide guidance to upper-year students on the courses that define a particular discipline, as well as a community of study for those students taking several courses together. Please see details in the Emphases section.

Mode of Delivery: In person
Program Length: 8 sessions full-time (typical registration sequence: FWS-FWS-FW)
Time Limit: 3 years full-time

Management, Rotman School: Management Executive MBA

The **Rotman One-Year Executive MBA** provides mid-to-senior working professionals and entrepreneurs who have management experience with the business knowledge and leadership skills they need to take their careers to the next level. The innovative 13-month curriculum, taught by world-class faculty, is focused on developing senior management strategy, decision-making, and leadership skills.

Classes take place every other Thursday night, Friday, and Saturday, with four week-long residential modules spread throughout the program so that students maximize the learning experience while minimizing time away from work.

Executive MBA

Minimum Admission Requirements

- Applicants are considered under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Rotman School's additional admission requirements stated below.
- Admission is restricted to applicants with current full-time employment and significant professional work and managerial experience:
  - 8+ years of full-time work experience.
  - 3+ years in a mid-to-senior management role.
- Demonstrated teamwork and leadership skills.
- People and/or project management experience.
- Admissions interview.
- A recognized undergraduate degree or equivalent.
- Applicants must obtain either a satisfactory score for the Executive Assessment (from the Graduate Management Admission Council), Executive MBA Diagnostic Tool (EDT), the Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE; General Test).
- Exemptions from the entrance exam requirement are granted to applicants who have:
  - Passed at least the Level II examination of the Chartered Financial Analyst (CFA) designation, or equivalent designations in other jurisdictions at the discretion of the Academic Director;

  - Passed the Common Final Exam (CFE) (or former UFE) for a Certified Professional Accountant (CPA) designation, or equivalent designations in other jurisdictions at the discretion of the Academic Director;
  - Attained the professional designation in Engineering (PEng) or in Actuarial Sciences (ACIA or FCIA), or equivalent designations in other jurisdictions at the discretion of the Academic Director.
- If required, completion of the following English proficiency tests:
  - Test of English as a Foreign Language (TOEFL) Internet-based format: overall score of 100 with a minimum of 22 on the writing and speaking sections.
  - International English Language Testing System (IELTS) Academic: score of 7.0 with minimum 6.5 required for each component.
- Applicants who meet all the minimum admission requirements will be assessed by the admissions committee on the basis of grades, standardized test scores, references, essays, professional experience, and a personal interview.

Completion Requirements

- Within this 13-month program, students must successfully complete 23 courses, including the set of 14 core courses, with an accumulated credit weighting of 11.50.
- Students must complete a structured sequence of courses. No advanced standing will be granted for previous academic work completed or professional designations earned. Students who are unable to follow courses in their prescribed order must attain special approval from the Academic Director in order to continue in the program.
- With the permission of the Academic Director, students in good standing may apply to participate and take up to one course in an international exchange program approved by the University of Toronto. Courses selected are subject to the approval of the Academic Director.
- Core courses:
  - RSM5001H *Strategy 1*
  - RSM5011H *Capstone Project*
  - RSM5101H *Economics 1*
  - RSM5102H *Economics 2*
  - RSM5201H *Accounting 1*
  - RSM5301H *Finance 1*
  - RSM5302H *Finance 2*
  - RSM5401H *Business Operations*
  - RSM5501H *Marketing 1*
  - RSM5600H *Personal Leadership*
  - RSM5602H *Negotiations*
  - RSM5603H *The Business Environment: Ethics*
  - RSM5614H *EMBA Leadership Development Practicum*
  - RSM5801H *Quantitative Reasoning for Management*.
- At the discretion of the Academic Director and the Vice-Dean, MBA programs, up to four of the **non-core courses** may be substituted with elective courses from the list of electives offered for the Full-Time MBA and Extended Full-Time MBA (Morning/Evening) programs. Students may also substitute up to two of the non-core courses with elective courses offered for the Global Executive Master of Business Administration (GEMBA) field. Note that the GEMBA field is only offered as part of the dual degree with Bocconi University. Available GEMBA electives vary each year. Courses will be communicated to students upon program start.
- Non-core courses:
  - RSM2609H *Aligning People with Strategy*
  - RSM2619H *Power and Influence in Organizations*
  - RSM5002H *Strategy 2*
  - RSM5006H *Corporate Governance*
  - RSM5007H *International Business*
  - RSM5009H *Topics in Strategic Management*
  - RSM5202H *Accounting 2*
  - RSM5291H *Business Problem Solving: A Model-Based Approach*
  - RSM5502H *Marketing 2*
  - RSM5601H *Organizational Leadership*
  - RSM5605H *The Thoughtful Leader*
  - RSM5609H *Special Topics in Organizational Behaviour*.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F)
Time Limit: 3 years full-time

Management, Rotman School: Management Executive MBA; Field: Global (Dual Degree)

Dual Degree Program: Global Executive Master of Business Administration (University of Toronto / Bocconi University)

The Global Executive MBA (GEMBA) field may only be taken as part of a dual degree offered by the University of Toronto's Rotman School of Management and Bocconi University's SDA Bocconi School of Management. This offering is commonly referred to as the "Rotman-SDA Bocconi Global Executive MBA.

Spanning 18 months and seven business centres across four continents, the program accepts applications from full-time professionals in for-profit businesses, not-for-profit enterprises, research institutes, and entrepreneurial ventures from around the globe. The Rotman-SDA Bocconi GEMBA will change the way students think, network, and do business in some of the world's largest markets: North America, East Asia, South Asia, Europe, and Latin America.

Upon successful completion of the degree requirements of both programs, students will receive an MBA from the Rotman School and a Global Executive MBA from SDA Bocconi.

Contact

www.rotman.utoronto.ca/Degrees/MastersPrograms/MBAPrograms/GEMBA
www.sdabocconi.it/en/mba-executive-mba/global-executive-mba

Rotman-SDA Bocconi Global Executive MBA Program
Rotman School of Management, University of Toronto
Email: gemba@rotman.utoronto.ca

Rotman-SDA Bocconi Global Executive MBA Program
SDA Bocconi School of Management, Bocconi University
Email: info@sdabocconi.it

Application Process

- Applicants may apply to either the Rotman School or SDA Bocconi.
- Applicants applying through Rotman must submit their application online.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Rotman School's additional admission requirements stated below.
- Five years of work experience with a minimum of two years at the management level (people, project, and/or budget management experience).
- Recognized undergraduate degree or equivalent.
- Applicants must obtain a satisfactory score for one of the following tests: the Rotman Executive Diagnostic Test (EDT), the SDA Bocconi diagnostic test, the Graduate Management Admission Test (GMAT), or the Graduate Record Examination (GRE; General Test). Test results are valid for five years. For further details, contact the admissions office.
- If required, completion of the following English proficiency tests:
  - Test of English as a Foreign Language (TOEFL) Internet-based format: overall score of 100 with a minimum of 22 on the writing and speaking sections.
  - International English Language Testing System (IELTS) Academic: score of 7.0 with minimum 6.5 required for each component.
- Current full-time employment.
- Ability to work in international teams and demonstrated leadership skills.

Program Requirements

Students complete 10 modules of between 5.5 and 8.5 days each, held in various cities. Within this 18-month dual degree program:

- Students must complete 26 courses worth **12.25 full-course equivalents (FCEs)** consisting of 24 required courses and 2 electives. The 2 electives may be taken through the Rotman School, or SDA Bocconi, or exchange partner schools (with courses at the latter pre-approved by the program Academic Directors). The available Rotman electives will be communicated approximately 4 to 6 months before the summer elective period (July and August).
- See the list of required Rotman courses.

Program Length

5 sessions (18 months) full-time (typical registration sequence: F/W/S/F/W)

Time Limit

3 years

Management, Rotman School: Management Executive MBA; Field: Global Healthcare and the Life Sciences

The intensive 15-month **Global Executive MBA for Healthcare and the Life Sciences (GEMBA-HLS)** is designed for working professionals in the healthcare and life sciences industries. This field of study immerses students in key healthcare and life sciences clusters around the world. By learning from leading faculty and experienced sector leaders, students gain the knowledge and skills needed for success. While exploring current and future best practices globally, students are guided through an in-depth assessment of their own capabilities with a view to becoming more impactful leaders.

Over the 15 months of the program, students will partake in five international modules in some of the world's key healthcare and life sciences markets (currently three in Toronto, and one each in Singapore and London, U.K.). The program is delivered in a blended model, with in-person classes, hybrid classes with both in-person learning and online learning, and online classes. It leverages the strengths of the Rotman School, as well as relationships with the University of Toronto and the global healthcare and life sciences communities. Located on the edge of Toronto's medical discovery district, Rotman is uniquely positioned to play a leading role in the management innovations taking place in pharmaceuticals and biotechnology, medical technology, medical informatics, telemedicine, insurance, patient engagement, long-term care, and health system design.

MBA; Field: Global Healthcare and the Life Sciences

Minimum Admission Requirements

- Applicants are considered under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Rotman School's additional admission requirements stated below.
- Admission is restricted to applicants with significant professional work and managerial experience in healthcare or the life sciences:
  - 8+ years of full-time work experience.
  - 3+ years in a mid-to-senior leadership, management, or administrative role (or equivalent).
  - Demonstrated teamwork and leadership skills.
- A base of knowledge of healthcare or life sciences organizations.
- Evidence of academic achievement.
- Applicants must obtain either a satisfactory score on one of the following tests: the Executive Assessment (from the Graduate Management Admission Council), Rotman Executive MBA Diagnostic Tool (EDT), the Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE; General Test). Test results are valid for five years. See further details or contact the admissions office.
- Exemptions from the entrance exam requirement are granted to applicants who:

  - Passed at least the Level II examination of the Chartered Financial Analyst (CFA) designation, or equivalent designations in other jurisdictions at the discretion of the Academic Director;
  - Passed the Common Final Exam (CFE) (or former UFE) for a Certified Professional Accountant (CPA) designation, or equivalent designations in other jurisdictions at the discretion of the Academic Director;
  - Attained the professional designation in Engineering (PEng) or in Actuarial Sciences (ACIA or FCIA), or equivalent designations in other jurisdictions at the discretion of the Academic Director.
- If required, completion of the following English proficiency tests:
  - Test of English as a Foreign Language (TOEFL) Internet-based format: overall score of 100 with a minimum of 22 on the writing and speaking sections.
  - International English Language Testing System (IELTS) Academic: score of 7.0 with minimum 6.5 required for each component.
- Applicants who meet all the minimum admission requirements will be assessed by the admissions committee on the basis of grades, standardized test scores, references, essays, professional experience, and a personal interview.
- Please note that special program fees apply for this program.

Completion Requirements

- Within this 15-month program, students must successfully complete a **structured sequence of 22 courses**, including the set of **12 core courses below**, with an accumulated credit weighting of 11.50. No advanced standing will be granted for previous academic work completed or professional designations earned. Students who are unable to follow courses in their prescribed order must attain special approval from the Academic Director in order to continue in the program.
  - RSM5001H *Strategy 1*
  - RSM5015Y *Capstone Project*
  - RSM5101H *Economics 1*
  - RSM5201H *Accounting 1*
  - RSM5301H *Finance 1*
  - RSM5302H *Finance 2*
  - RSM5401H *Business Operations*
  - RSM5501H *Marketing 1*
  - RSM5600H *Personal Leadership*
  - RSM5603H *The Business Environment: Ethics*
  - RSM5604H *Leadership Development Practicum*
  - RSM5801H *Quantitative Reasoning for Management*.
- For each cohort, the Academic Director will choose **10 of the non-core courses (5.0 FCEs)** from the list below. At the discretion of the Academic Director and the Vice-Dean, MBA Programs, up to four of the non-core courses may be substituted with elective courses from the list of electives offered for the Full-Time MBA and Extended Full-Time MBA (Morning/Evening) Programs.
  - RSM2020H *Health Sector Strategy and Organizations*
  - RSM2085H *Healthcare Innovation*
  - RSM2522H *Marketing and Behavioural Economics*
  - RSM2523H *Business Design Fundamentals*
  - RSM5007H *International Business*
  - RSM5012H *Special Topics: Global Health Systems*
  - RSM5013H *Digital Health*
  - RSM5014H *Data Analytics and Strategic Decision-Making in Health and Life Sciences*
  - RSM5023H *Strategic Change and Implementation*
  - RSM5108H *Decision-Making with Models and Data*
  - RSM5109H *Rotman Study Tour*
  - RSM5601H *Organizational Leadership*
  - RSM5602H *Negotiations*
  - RSM5605H *The Thoughtful Leader*.
- The Global Executive MBA for Healthcare and the Life Sciences follows a blended model of delivery; i.e., a mix of in-person, hybrid, and online courses. It is offered during five residency modules (of between 6 and 8 days each) held in various cities and four online sessions. Supplemental curriculum hours are delivered online.

Mode of Delivery: In person, Hybrid
Program Length: 4 sessions full-time (typical registration sequence: W-S-F-W)
Time Limit: 3 years full-time

Management, Rotman School: Finance MF

The **Master of Finance (MF)** program provides the most in-depth theoretical and applied finance training currently available. Aimed at experienced working professionals, the program is delivered on Wednesday evenings and alternating Saturdays over 20 months. This enables students to advance their career without leaving work, and be able to apply the knowledge learned in the classroom immediately in the workplace. Students come from a variety of backgrounds such as financial risk, portfolio management, corporate finance, equity research, accounting, sales and trading, insurance, pensions, and legal settings.

The MF program is offered via dual delivery for students entering the program from 2021 to 2025. Students may choose to attend classes in-person or online for the full duration of the program.

Note: effective April 21, 2025, admissions have been administratively suspended.

Master of Finance

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Rotman School's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university.
- A satisfactory score on the Graduate Management Admissions Test (GMAT) or GRE (Graduate Record Examination; General Test). Exemptions from the GMAT/GRE requirement are granted to applicants who have:
  - Passed the Common Final Exam (CFE) (or former UFE) for a Certified Professional Accountant (CPA) designation or equivalent designations in other jurisdictions recognized by CPA Canada (or CPA Ontario).

    - Passed at least the Level II examination of the Chartered Financial Analyst (CFA) designation.
    - With the permission of the Academic Director, graduated from accredited universities with high distinction (cumulative grade point average of 3.5 of higher).
    - Attained a professional designation in Engineering (PEng) or in Actuarial Sciences (ACIA or FCIA) or equivalent designations in other jurisdictions recognized by Engineers Canada or Canadian Institute of Actuaries, respectively.
- At least two years of full-time work experience in finance or a finance-related field is strongly recommended. Applicants who do not have the recommended work experience will be considered on a case-by-case basis, particularly if accompanied by demonstrated exceptional academic and professional potential.
- Applicants who meet all the criteria will be assessed on the basis of their application essay, grades, standardized graduate test scores, references, and professional experience by the admissions committee. Prospective students will then be invited for an admission interview. The admission decision will be based on both submitted materials and interview performance.

Completion Requirements

- Within this 20-month program (two academic years), students must successfully complete a structured sequence of **6.0 full-course equivalents (FCEs)** (12 half-course equivalents) taken over five sessions. No advanced standing will be granted for previous academic work completed or professional designations earned. Students who are unable to follow courses in their prescribed order must attain special approval from the Academic Director in order to continue in the program.
    - RSM4113H *Macroeconomics for Finance Professionals*
    - RSM4216H *Financial Reporting and Financial Statement Analysis*
    - RSM4310H *Foundations of Finance*
    - RSM4315H *Investment Banking and Corporate Valuation*
    - RSM4317H *Analysis of Fixed Income Markets*
    - RSM4318H *Applied Portfolio Management*
    - RSM4319H *Forecasting Risks and Opportunities for Financial Securities*
    - RSM4322H *Applications of Derivatives Products*
    - RSM4323H *Investments*
    - RSM4324H *Innovations in Financial Technology*.
- In addition to the above required courses, students will be required to take two MBA electives under the Finance emphasis in Year 2.
- Consult the departmental website for course descriptions.

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW)
Time Limit: 3 years full-time

Management, Rotman School: Financial Risk Management MFRM

The **Master of Financial Risk Management (MFRM)** program is designed to prepare students who excel at finance and quantitative analysis for careers in this in-demand sector. A bridge between academic and professional life, this full-time, 10-month program allows students to fast-track into the finance industry — giving them a competitive edge over applicants with only an undergraduate degree.

Students will gain a better understanding of the different types of risk, the regulatory environment, and how different financial institutions manage uncertainty. They consider the ways risk is measured and managed, looking at systems and models currently used within the financial sector.

Students have the opportunity to gain real-world experience during the Risk Management Project which takes place midway through the program. They will work on a real risk issue that is relevant and of interest to financial institutions. During the nine-week project, students will be taken out of the classroom and into industry, working with practising risk management professionals.

Master of Financial Risk Management

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Rotman School's additional admission requirements stated below.
- **A recognized four-year undergraduate degree or equivalent:** A business, commerce, economics, mathematics, engineering, or actuarial science degree is preferred. However, other four-year undergraduate degrees will be considered if there is evidence of strong quantitative skills with a minimum B average in calculus, linear algebra, and statistics or econometrics.
- **Quantitative proficiency**, usually demonstrated through the completion of university-level courses with a minimum B average, in calculus, linear algebra, and statistics and/or econometrics during the undergraduate degree.
- Two academic references.
- Essays (written essay, video questions, and real-time written response).
- English-language proficiency (if required).
- **Prerequisite knowledge in the following areas, usually demonstrated through the completion of university-level courses:**
    - Foundations of finance.
    - Financial accounting.
    - Investments.
    - Financial derivatives.
    - Applicants who have not completed courses in one or more of these subject areas may be offered admission conditional on successful completion of one or more qualifying examinations demonstrating equivalent knowledge.

- Demonstrated knowledge of **Python coding**. All offers of admission will be conditional upon the successful completion of a Python coding online course and examination. Applicants will be given access to online instruction modules in preparation for the examination and will have up to two attempts prior to the start date of the program.
- Applicants who meet all the criteria will be assessed on the basis of their application essays, answers to video questions, grades, and references by the admissions committee. Selected applicants will then be invited for an admission interview. The admission decision will be based on both submitted materials and interview performance.

Completion Requirements

- Within this 10-month, full-time program (three sessions), students must successfully complete a structured sequence of 12 half courses (**6.0 full-course equivalents [FCEs]**). No advanced standing will be granted for previous academic work completed or professional designations earned. Students who are unable to follow courses in their prescribed order must attain special approval from the Academic Director in order to continue in the program. The courses in the program are as follows:
  - RSM6301H *Topics in Financial Risk*
  - RSM6302H *Financial Markets, Risk, and Institutions*
  - RSM6303H *Regulation of Financial Institutions*
  - RSM6304H *Operational Risk*
  - RSM6305H *Credit Risk*
  - RSM6306H *Probabilistic Modelling for Risk-Informed Decisions*
  - RSM6307H *Macroeconomics for Financial Risk Management Professionals*
  - RSM6308H *Advanced Investments*
  - RSM6310H *Derivative Models for Risk Management*
  - RSM6311H *Rotman Risk Management Project*
  - RSM6313H *Innovations in Financial Technology*
  - RSM6601H *MFRM Self Development Lab*.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

Management, Rotman School: Management Analytics MMA

The professional **Master of Management Analytics (MMA)** degree program offers a curriculum that combines analytical depth with a focus on business issues and applications. Analytical depth is provided by courses on acquisition and structuring of data, predictive and prescriptive analytics, machine learning, artificial intelligence (AI) and deep learning, decision analysis, and simulation modelling. Courses applying analytics to business feature the use of analytics in marketing, operations, supply chain management, accounting, and finance. Students are exposed to real-life application of management analytics through the analytics practicum.

The MMA degree program is offered over 11 months using a cohort-based model. Students must complete a sequence of 14 half-course equivalents (7.0 full-course equivalents [FCEs]) on a full-time basis. Students who are unable to follow courses in their prescribed order must attain special approval from the Academic Director in order to continue in the program. The MMA is designed for pre-experience graduates.

Master of Management Analytics

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Rotman School's additional admission requirements stated below.
- **Appropriate four-year undergraduate degree or equivalent:** Given the nature of the MMA program, degrees in Computer Science, Statistics, Mathematics, Engineering, Physical Science, Economics, and Commerce will be preferred, but degrees from any program where there is a significant quantitative and computational component will be considered.
- **Quantitative proficiency:** Evidence of a high level of proficiency (a minimum B average) in quantitative subjects is required. Mastery of mathematics is essential including, at a minimum, calculus and linear algebra, as are courses covering probability and statistics. In cases where evidence of quantitative proficiency is not obvious, applicants must provide supplemental evidence. All offers of admission will be conditional on successful completion of a qualifying examination in statistics.
- **Computational proficiency:** Demonstrated proficiency in Python coding. All offers of admission will be conditional on successful completion of an assessment of Python coding.
- **Prerequisite knowledge in foundations of finance and financial accounting, usually demonstrated through the completion of university-level courses.** Applicants who have not completed courses in one or both of these subject areas may be offered admission conditional on successful completion of one or more qualifying examinations that will demonstrate the applicant's equivalent knowledge.
- **English-language proficiency:** Applicants must demonstrate the ability to communicate in English in one of the following ways:
  - An undergraduate or graduate degree from a university at which the language of instruction and examination was English.
  - Applicants whose primary language is not English and who graduated from a university where the language of instruction is not English must achieve a Test of English as a Foreign Language (TOEFL) score of at least 100. The International English Language Testing System (IELTS) may be considered in special circumstances with a minimum score of 7.0 required.
- Two academic references.
- Essays (written essay, video questions, and real-time written response).
- All successful applicants are expected to demonstrate effective oral and written communication skills.

- Demonstration of academic ability; a high Graduate Management Admission (GMAT) or Graduate Record Examination (GRE) score is encouraged, though it is not mandatory.
- Applicants who meet all the criteria will be assessed on the basis of their application essays, answers to the video questions, grades, and references by the admissions committee.
- Selected applicants will then be invited for an admission interview. The admission decision will be based on both submitted materials and interview performance.

Completion Requirements

- Students must be on campus by early to mid-August.
- Within this three-session program, students must successfully complete a sequence of **7.0 full-course equivalents (FCEs)** (14 half-course equivalents). No advanced standing will be granted for previous academic work completed or professional designations earned. Students who are unable to follow courses in their prescribed order must attain special approval from the Academic Director in order to continue in the program.
  - **5.5 FCEs** (11 half-course equivalents) are mandatory for all MMA students and are completed as a structured sequence of courses as follows:
    - RSM8411H *Structuring and Visualizing Data for Analytics*
    - RSM8413H *Machine Learning Analytics*
    - RSM8414H *Tools for Probabilistic Models and Prescriptive Analytics*
    - RSM8431Y *Analytics Colloquia*
    - RSM8432H *Management Analytics Practicum*
    - RSM8502H *Data-Based Management Decisions*
    - RSM8512H *Modeling Tools for Predictive Analytics*
    - RSM8521H *Leveraging AI and Deep Learning Tools in Marketing*
    - RSM8601H *MMA Self Development Lab*
    - RSM8901H *Analytics in Management*.
  - **1.5 FCEs** (3 half-course equivalents) chosen from the following list. Note: not all electives are offered each year.
    - RSM8001H *Causal Identification for Management Analysis*
    - RSM8002H *The Analytics of Talent Strategy*
    - RSM8224H *Analytic Insights Using Accounting and Financial Data*
    - RSM8301H *Analytical Methods in Finance*
    - RSM8415H *Service Analytics for Management Analysis*
    - RSM8416H *Healthcare Analytics*
    - RSM8423H *Optimizing Supply Chain Management and Logistics*
    - RSM8522H *Analytics for Marketing Strategy*.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

Management, Rotman School: Professional Accounting GDipPA

The **Rotman Graduate Diploma in Professional Accounting (GDipPA)** is an excellent way to gain advanced standing in the pursuit of a Chartered Professional Accountant (CPA) certification. This 12-week summer program deepens knowledge of accounting while satisfying four modules of the CPA Professional Education Program (CPA PEP). The program helps prepare students for the Common Final Examination (CFE) and allows them to advance straight to the Capstone 1 module in the CPA PEP.

The program takes advantage of the depth of accounting expertise at the Rotman School as well as its long-standing commitment to professional accounting education.

Graduate Diploma in Professional Accounting

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy additional admission requirements stated below.
- Admission to the program is available to students in Year 4 or to recent graduates of the following University of Toronto undergraduate programs:
  - Rotman's Bachelor of Commerce (Accounting Specialist).
  - University of Toronto Mississauga's Bachelor of Commerce (Accounting Specialist).
  - University of Toronto Scarborough's Bachelor of Business Administration (Specialist in Management and Accounting).
- University of Toronto students who are not currently completing one of the accounting specialist programs are required to take specific courses to be considered as applicants to the GDipPA program.
- Applicants from outside the University of Toronto: The accreditation that the University of Toronto has received from CPA Ontario specifies that only candidates with University of Toronto degrees, or equivalent, may be given advanced standing in the CPA Professional Education Program (PEP). In determining whether a degree from another Canadian university is equivalent, the admissions committee will review each submitted application individually. Prior to applying, applicants are encouraged to ensure that the courses they have taken meet the requirements for entry into CPA PEP.
- **Course requirements:**
  - Successful completion of all the courses required for entry into the CPA Professional Education Program (CPA PEP) as determined with CPA Ontario:
    - Required core courses: a minimum overall average of 70%.
    - Each individual core course: a minimum grade of 60%.
    - Each individual non-core course: a passing grade or 50%, whichever is higher.

- Applicants who meet all the criteria will be assessed on the basis of their application package and grades by the admissions committee. Selected applicants may be invited for an admission interview.

Completion Requirements

- Students must successfully complete a structured sequence of **2.5 full-course equivalents (FCEs)** (five half courses). No advanced standing will be granted for previous academic work completed or professional designations earned. Students who are unable to follow courses in their prescribed order must attain special approval from the Academic Director in order to continue in the program. The courses in the program are:
  - RSM7201H *Advanced Financial Reporting*
  - RSM7202H *Advanced Taxation*
  - RSM7203H *Advanced Topics in Assurance and Control*
  - RSM7301H *Finance and Professional Practice*
  - RSM7204H *Integration and Analysis*.

Mode of Delivery: In person
Program Length: 1 session full-time (typical registration sequence: S)
Time Limit: 2 years full-time

Management, Rotman School: Emphases

Data Analytics and Modeling

Participating Programs:

- Management Full-Time and Extended Full-Time MBA

MBA students (Full-Time or Extended Full-Time) must successfully complete **five half courses (2.5 full-course equivalents [FCEs])** from the following lists, with at least two half courses (1.0 FCE) from the list of main courses.

Main Courses

RSM2129H, RSM2401H, RSM2408H, RSM2409H, RSM2506H.

Supplemental Courses

RSM2125H, RSM2209H, RSM2215H, RSM2303H, RSM2405H, RSM2513H, RSM2521H.

Finance

Participating Programs:

- Management Full-Time and Extended Full-Time MBA

MBA students (Full-Time or Extended Full-Time) must successfully complete **five half courses (2.5 full-course equivalents [FCEs])** from the following lists, with at least two half courses (1.0 FCE) from the list of main courses.

Main Courses

RSM2204H, RSM2209H, RSM2212H, RSM2300H, RSM2302H, RSM2306H, RSM2309H.

Supplemental Courses

RSM2210H, RSM2215H, RSM2301H, RSM2303H, RSM2304H, RSM2305H, RSM2307H, RSM2308H, RSM2310H, RSM2312H, RSM2313H, RSM2314H, RSM2315H, RSM2321H, RSM2326H, RSM2328H, RSM2329H.

Global Management

Participating Programs:

- Management Full-Time and Extended Full-Time MBA

MBA students (Full-Time or Extended Full-Time) must successfully complete **five half courses (2.5 full-course equivalents [FCEs])** from the following lists, with at least two half courses (1.0 FCE) from the list of main courses.

Main Courses

RSM2011H, RSM2123H, RSM2127H, RSM2701H, RSM2709H.

Supplemental Courses

RSM2018H, RSM2305H, RSM2612H, RSM2616H.

Health Sector Management

Participating Programs:

- Management Full-Time and Extended Full-Time MBA

MBA students (Full-Time or Extended Full-Time) must successfully complete **five half courses (2.5 full-course equivalents [FCEs])** from the following lists, with at least two half courses (1.0 FCE) from the list of main courses.

Main Courses

RSM2020H, RSM2059H, RSM2083H.

Supplemental Courses

RSM2017H, RSM2054H, RSM2057H, RSM2407H, RSM2518H, RSM2523H, RSM2702H, HAD5713H, HAD5760H.

Innovation, Entrepreneurship, and Business Design

Participating Programs:

- Management Full-Time and Extended Full-Time MBA

MBA students (Full-Time or Extended Full-Time) must successfully complete **five half courses (2.5 full-course equivalents [FCEs])** from the following lists, with at least one half course (0.5FCE) from the list of main courses.

Main Courses

RSM2008H, RSM2012H, RSM2523H.

Supplemental Courses

RSM2013Y, RSM2054H, RSM2057H, RSM2081H, RSM2085H, RSM2212H, RSM2216H, RSM2314H, RSM2511H, RSM2516H, RSM2517H, RSM2518H, RSM2524H, RSM2526H.

Leadership

Participating Programs:

- Management Full-Time and Extended Full-Time MBA

MBA students (Full-Time or Extended Full-Time) must successfully complete **five half courses (2.5 full-course equivalents [FCEs])** from the following lists, with at least two half courses (1.0 FCE) from the list of main courses.

Main Courses

RSM2601H, RSM2604H, RSM2619H, RSM2620H, RSM2621H.

Supplemental Courses

RSM2211H, RSM2603H, RSM2609H, RSM2613H, RSM2618H, RSM2625H, RSM2640H, RSM2913H, RSM2920H.

Marketing

Participating Programs:

- Management Full-Time and Extended Full-Time MBA

MBA students (Full-Time or Extended Full-Time) must successfully complete **five half courses (2.5 full-course equivalents [FCEs])** from the following lists, with at least two half courses (1.0 FCE) from the list of main courses.

Main Courses

RSM2504H, RSM2513H, RSM2521H, RSM2522H.

Supplemental Courses

RSM2500H, RSM2505H, RSM2506H, RSM2508H, RSM2511H, RSM2512H, RSM2519H, RSM2525H.

Real Estate

Participating Programs:

- Management Full-Time and Extended Full-Time MBA

MBA students (Full-Time or Extended Full-Time) must successfully complete **five half courses (2.5 full-course equivalents [FCEs])** from the following lists, with at least two half courses (1.0 FCE) from the list of main courses.

Main Courses

RSM2126H, RSM2128H, RSM2130H.

Supplemental Courses

RSM2012H, RSM2125H, RSM2129H, RSM2132H, RSM2209H, RSM2211H, RSM2304H, RSM2306H, RSM2310H, RSM2506H, RSM2703H.

Strategy

Participating Programs:

- Management Full-Time and Extended Full-Time MBA

MBA students (Full-Time or Extended Full-Time) must successfully complete **five half courses (2.5 full-course equivalents [FCEs])** from the following lists, with at least two half courses (1.0 FCE) from the list of main courses.

Main Courses

RSM2021H, RSM2023H, RSM2052H, RSM2061H.

Supplemental Courses

RSM2011H, RSM2014H, RSM2017H, RSM2018H, RSM2020H, RSM2057H, RSM2058H, RSM2059H, RSM2062H, RSM2063H, RSM2125H, RSM2212H, RSM2309H, RSM2406H, RSM2500H, RSM2609H.

Sustainability and Society

Participating Programs:

- Management Full-Time and Extended Full-Time MBA

MBA students (Full-Time or Extended Full-Time) must successfully complete **five half courses (2.5 full-course equivalents [FCEs])** from the following lists, with at least one half course (0.5 FCE) from the list of main courses.

Main Courses

RSM2014H, RSM2081H, RSM2313H, RSM2615H.

Supplemental Courses

RSM2019H, RSM2122H, RSM2416H, RSM2640H, RSM2702H, RSM2703H, RSM2706H, ENV1707H.

Management, Rotman School: Management MBA Full-Time Courses

Required Courses to be Completed in Year 1

Weighting for 1000-level courses is determined by the second digit of the four-digit course number as follows:

Second Digit	Course Weight
1	one credit hour
2	two credit hours
3	three credit hours

Course Code	Course Title
RSM1160H	Business Ethics
RSM1165H	Leveraging Diverse Teams
RSM1201H	Foundations of Strategic Management
RSM1210H	Managerial Economics
RSM1211H	Economic Environment of Business
RSM1215H	Decision Making with Models and Data
RSM1220H	Financial Accounting and Reporting: A Global Perspective
RSM1222H	Managerial Accounting
RSM1231H	Finance I: Global Markets and Valuation
RSM1232H	Finance II: Corporate Finance
RSM1240H	Operations Management
RSM1250H	Managing Customer Value
RSM1260H	Leading People in Organizations
RSM1282H	Statistics for Management
RSM1380H or RSM1381H	Applied Management: Placement or Applied Management: Independent Study

Elective Courses for the Full-Time and Morning/Evening MBA Programs

Not all courses are offered every year. Consult the department each session about course offerings.

Course Code	Course Title
RSM2003H	Research Project
RSM2008H	Creative Destruction Lab Intro
RSM2011H	International Strategy
RSM2012H	Entrepreneurship
RSM2013Y	Creative Destruction Lab Advanced
RSM2014H	Sustainability Strategy
RSM2017H	Pharmaceutical Strategy
RSM2018H	Strategy in Emerging Markets
RSM2019H	Corporation 360
RSM2020H	Health Sector Strategy and Organizations
RSM2021H	Corporate Strategy
RSM2023H	Strategic Change and Implementation
RSM2030H	Canadian Business History
RSM2040H	Special Topics in Strategy
RSM2052H	Management Consulting
RSM2054H	Technology Strategy
RSM2057H	Venture Capital Strategy
RSM2058H	Communicating Strategy
RSM2059H	Healthcare and Life Sciences Consulting: Field Application Project
RSM2061H	Strategic Networks
RSM2062H	Management Consulting Practicum
RSM2063H	Catastrophic Failure in Organizations
RSM2081H	Social Entrepreneurship

Course Code	Course Title
RSM2083H	Special Topics in Strategic Management
RSM2085H	Healthcare Innovation
RSM2087H	Multi-Disciplinary Special Topics
RSM2088H	Designing for Equality
RSM2098H	Special Topics in Strategic Management
RSM2099H	Special Topics in Strategic Management
RSM2109H	Rotman Study Tour
RSM2113H	Model-Based Decision Making in Practice
RSM2122H	Clean Energy: Policy Context and Business Opportunities
RSM2123H	International Business in the World Economy
RSM2125H	Game Theory and Applications for Management
RSM2126H	Real Estate Development
RSM2127H	Economic Environment of International Business
RSM2128H	Real Estate Economics
RSM2129H	Forecasting Models and Econometric Methods
RSM2130H	Real Estate Investment
RSM2132H	Business and the City
RSM2198H	Special Topics in Economic Analysis and Policy
RSM2199H	Special Topics in Economic Analysis and Policy
RSM2204H	Taxation and Decision-Making
RSM2209H	Financial Statement Analysis
RSM2210H	Financial Distress and Insolvency
RSM2211H	Business Law
RSM2212H	Business Analysis and Valuation
RSM2215H	Special Topics in Accounting
RSM2216H	Special Topics in Accounting
RSM2298H	Special Topics in Accounting
RSM2299H	Special Topics in Accounting
RSM2300H	Corporate Financing
RSM2301H	Financial Management
RSM2302H	Security Analysis and Portfolio Management
RSM2303H	Risk Modelling and Financial Trading Strategies
RSM2304H	Financial Institutions and Capital Markets

Course Code	Course Title
RSM2305H	International Financial Management
RSM2306H	Options and Futures Markets
RSM2307H	Advanced Derivatives
RSM2308H	Financial Risk Management
RSM2309H	Mergers and Acquisitions
RSM2310H	Analysis and Management of Fixed Income Securities
RSM2312H	Value Investing
RSM2313H	Sustainable Finance
RSM2314H	Private Equity and Entrepreneurial Finance
RSM2315H	Management of Private Wealth
RSM2318H	Special Topics in Finance
RSM2321H	Special Topics in Finance
RSM2322H	Special Topics in Finance
RSM2326H	How Banks Work: Management in a New Technological Age
RSM2327H	Islamic Finance in Canada
RSM2328H	Machine Learning and Financial Innovation
RSM2329H	Block Chain and Decentralized Finance
RSM2398H	Special Topics in Finance
RSM2399H	Special Topics in Finance
RSM2401H	Data and Information Management for Business Analytics
RSM2405H	Supply Chain Management
RSM2406H	Operations Management Strategy
RSM2407H	Services Operations Management
RSM2408H	Modeling and Optimization for Decision Making
RSM2409H	Data Science for Managers
RSM2410H	Analytics and Operations Consulting
RSM2416H	Special Topics in Operations Management and Statistics
RSM2417H	Special Topics in Operations Management
RSM2498H	Special Topics in Operations Management and Statistics
RSM2499H	Special Topics in Operations Management and Statistics
RSM2500H	Marketing Strategy
RSM2504H	Consumer Behaviour
RSM2505H	Strategic Marketing Communications

Course Code	Course Title
RSM2506H	Marketing Research
RSM2508H	Sales Management
RSM2511H	Fintech Marketing: Innovation in the Marketing of Financial Services
RSM2512H	Branding
RSM2513H	Pricing
RSM2516H	Special Topics in Marketing
RSM2517H	Futures Thinking: Developing Business Insight
RSM2518H	Special Topics in Marketing
RSM2519H	Managing Customer Value 2.0
RSM2520H	Special Topics in Marketing
RSM2521H	Digital Marketing
RSM2522H	Marketing and Behavioural Economics
RSM2523H	Business Design Fundamentals
RSM2524H	Business Design Practicum
RSM2525H	One to One Marketing
RSM2526H	Creative Thinking for Business Innovation
RSM2527H	Design Research and Insight-Driven Storytelling
RSM2528H	Service Design: Innovating Service-Based Organizations
RSM2530H	Special Topics in Marketing
RSM2598H	Special Topics in Marketing
RSM2599H	Special Topics in Marketing
RSM2601H	Organization Design
RSM2603H	Advanced Negotiations and Conflict Management
RSM2604H	Managerial Negotiations
RSM2606H	Designing New Work Organizations
RSM2609H	Aligning People and Strategy
RSM2612H	Managing Talent for Global Operations
RSM2613H	C-Suite: Living Out Leadership Day to Day for Organizational Impact
RSM2615H	Special Topics in Organizational Behaviour and Human Resource Management
RSM2616H	Special Topics in Organizational Behaviour and Human Resource Management
RSM2618H	The Socially Intelligent Manager
RSM2619H	Power and Influence in Organizations
RSM2620H	Leading Teams
RSM2621H	Effective Leadership
RSM2622H	Leadership Development Lab
RSM2625H	Business Problem Solving: A Model-Based Approach
RSM2640H	Leading Social Innovation
RSM2698H	Special Topics in Organizational Behaviour and Human Resource Management
RSM2699H	Special Topics in Organizational Behaviour and Human Resource Management
RSM2700H	Independent Study Project
RSM2701H	Global Consulting Project
RSM2702H	OnBoard
RSM2703H	CityLab
RSM2706H	Special Topics in Finance
RSM2709H	Global Practicum
RSM2913H	Getting It Done®
RSM2920H	Top Manager’s Perspective
RSM2922H	The Opposable Mind
RSM2923H	Business Problem Solving
RSM3053H	Behavioural Research Methods in Marketing
RSM3059H	Special Topics in Marketing
RSM3069H	Special Topics in Organizational Behaviour and Human Resources
RSM3090Y	Reading Course
JDM3619H	Digital Media Distribution

Management, Rotman School: Management MBA Extended Full-Time Courses

Required Courses

Weighting for 1000-level courses is determined by the second digit of the four-digit course number as follows:

Second Digit	Course Weight
1	one credit hour
2	two credit hours
3	three credit hours

Course Code	Course Title
RSM1160H	Business Ethics
RSM1165H	Leveraging Diverse Teams
RSM1201H	Foundations of Strategic Management
RSM1210H	Managerial Economics
RSM1211H	Economic Environment of Business
RSM1215H	Decision Making with Models and Data
RSM1220H	Financial Accounting and Reporting: A Global Perspective
RSM1222H	Managerial Accounting
RSM1231H	Finance I: Global Markets and Valuation
RSM1232H	Finance II: Corporate Finance
RSM1240H	Operations Management
RSM1250H	Managing Customer Value
RSM1260H	Leading People in Organizations
RSM1282H	Statistics for Management
RSM2622H	Leadership Development Lab

Elective Courses

Shared with the full-time MBA program. See the full-time MBA course section.

Management, Rotman School: Management Executive MBA Courses

Required Courses

Core Courses

Course Code	Course Title
RSM5001H	Strategy 1
RSM5011H	Capstone Project
RSM5101H	Economics 1
RSM5102H	Economics 2
RSM5201H	Accounting 1
RSM5301H	Finance 1
RSM5302H	Finance 2
RSM5401H	Business Operations
RSM5501H	Marketing 1
RSM5600H	Personal Leadership
RSM5602H	Negotiations
RSM5603H	The Business Environment: Ethics
RSM5614H	EMBA Leadership Development Practicum (Credit/No Credit)
RSM5801H	Quantitative Reasoning for Management

Non-core Courses

At the discretion of the Academic Director and the Vice-Dean, MBA Programs, up to four of the non-core courses may be substituted with elective courses from the list of electives offered for the Full-Time MBA and Extended Full-Time MBA (Morning/Evening) Programs. Students may also substitute up to two of the non-core courses with elective courses offered for the Global Executive Master of Business Administration (GEMBA) field. Note that the GEMBA field is only offered as part of the dual degree with Bocconi University. Available GEMBA electives vary each year. Courses will be communicated to students upon program start.

Course Code	Course Title
RSM2528H	Service Design: Innovating Service-Based Organizations
RSM2609H	Aligning People with Strategy
RSM2619H	Power and Influence in Organizations
RSM5002H	Strategy 2
RSM5006H	Corporate Governance
RSM5007H	International Business
RSM5009H	Topics in Strategic Management
RSM5202H	Accounting 2
RSM5291H	Business Problem Solving: A Model-Based Approach
RSM5502H	Marketing 2
RSM5601H	Organizational Leadership
RSM5605H	The Thoughtful Leader
RSM5609H	Special Topics in Organizational Behaviour
RSM5610H	Inner Change

Management, Rotman School: Management Executive MBA; Field: Global (Dual Degree) Courses

Courses in this dual degree program follow the approved grading scale of High Honours/Honours/Pass/Low Pass/Fail, unless otherwise noted.

Required Courses for the Dual Degree Program, Global Executive MBA

Course Code	Course Title
RSM1360H	Leading People in Organizations
RSM2012H	Entrepreneurship
RSM2524H	Business Design Practicum
RSM2615H	Special Topics in Organizational Behaviour and Human Resource Management
RSM5001H	Strategy 1
RSM5002H	Strategy 2
RSM5007H	International Business
RSM5008H	Corporate Governance
RSM5019H	Special Topics in Strategy
RSM5101H	Economics 1
RSM5201H	Accounting 1
RSM5202H	Accounting 2
RSM5301H	Finance 1
RSM5302H	Finance 2
RSM5304H	Creating Value Through Acquisitions and Private Equity
RSM5313H	Special Topics in Finance
RSM5401H	Business Operations
RSM5501H	Marketing 1
RSM5602H	Negotiations
RSM5603H	The Business Environment: Ethics
RSM5604H	Leadership Development Practicum
RSM5607H	Leveraging Diverse Teams
RSM5608H	Business Analytics
RSM5801H	Quantitative Reasoning for Management
RSM5901H	Managing Innovation

Elective Courses

The available Rotman electives will be communicated approximately 4 to 6 months before the summer elective period (July and August).

Course Code	Course Title
RSM2528H	Service Design: Innovating Service-Based Organizations
RSM2698H	Special Topics in Organizational Behaviour
RSM5610H	Inner Change

Management, Rotman School: Management Executive MBA; Field: Global Healthcare and the Life Sciences Courses

Required Courses

Core Courses

Course Code	Course Title
RSM5001H	Strategy 1
RSM5015Y	Capstone Project
RSM5101H	Economics 1
RSM5201H	Accounting 1
RSM5301H	Finance 1
RSM5302H	Finance 2
RSM5401H	Business Operations
RSM5501H	Marketing 1
RSM5600H	Personal Leadership
RSM5603H	The Business Environment: Ethics
RSM5604H	Leadership Development Practicum
RSM5801H	Quantitative Reasoning for Management

Non-core Courses

For each cohort, the Academic Director will choose 10 of the non-core courses (5.0 FCEs) from the provided list. At the discretion of the Academic Director and the Vice-Dean, MBA Programs, up to four of these courses may be substituted with courses from the list of electives offered for the Full-Time MBA and Extended Full-Time MBA (Morning/Evening MBA) Programs.

Course Code	Course Title
RSM2020H	Health Sector Strategy and Organizations
RSM2085H	Healthcare Innovation
RSM2522H	Marketing and Behavioural Economics
RSM2523H	Business Design Fundamentals
RSM5007H	International Business
RSM5012H	Special Topics: Global Health Systems
RSM5013H	Digital Health
RSM5014H	Data Analytics and Strategic Decision-Making in Health and Life Sciences
RSM5023H	Strategic Change and Implementation
RSM5108H	Decision-Making with Models and Data
RSM5109H	Rotman Study Tour
RSM5601H	Organizational Leadership
RSM5602H	Negotiations
RSM5605H	The Thoughtful Leader

Management, Tri-campus

Management, Tri-campus: Introduction

Faculty Affiliation

Management, Tri-campus

Degree Programs

Management

PhD

- Fields:
  - Accounting;
  - Business Economics;
  - Finance;
  - Marketing;
  - Operations Management;
  - Organizational Behaviour and Human Resources Management;
  - Strategic Management

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Environmental Studies**
  - Management, PhD
- **Global Health (U of T Global Scholar)**
  - Management, PhD

Overview

The PhD in Management at the University of Toronto is a vibrant and intellectually rich environment for those interested in developing new insights in management scholarship. There is a close-knit community of scholars who value and celebrate insightful, breakthrough research.

The PhD is a challenging program which features coursework, cutting-edge research training, and close working relationships with some of the best management academics in the world. Students work closely with faculty in a research-led culture which emphasizes rigor, creativity, and innovation. The curriculum is carefully designed to support students as publishing scholars as early as possible in their doctoral studies. The success of this program is evidenced in placements in leading business schools and the impressive careers of its graduates.

Contact and Address

Graduate Department of Management

Web: www.rotman.utoronto.ca/Degrees/PhD
Email: Kate.Alexandrova@rotman.utoronto.ca
Telephone: (416) 946-0894

Rotman School of Management
University of Toronto 105 St. George Street
Toronto, Ontario M5S 3E6 Canada

Management, Tri-Campus: Graduate Faculty

Full Members

Afeche, Philipp - BA, MS, PhD
Aggarwal, Pankaj - BEc, MBA, MBA, PhD
Agrawal, Ajay - BASc, MEng, MBA, PhD
Aivazian, Varouj - BS, MA, PhD
Akey Jr., Pat - BCom, MRes, PhD
Amernic, Joel - BSc, MBA, CA
Anastakis, Dimitry - PhD
Averbakh, Igor - MSc, PhD
Bar-Isaac, Heski - BA, MSc, PhD
Baron, Opher - BSc, MBA, PhD
Baum-Snow, Nathaniel - AB, PhD
Baum, Joel - BA, MBA, PhD
Blum, Bernardo - BA, MA, MA, PhD
Booth, Laurence - BSc, MBA, MA, DBA
Bova, Francesco - BComm, MA, MBA, MPH, PhD
Brooks, Leonard - BCom, MBA, CA, CPA
Bryan, Kevin - BA, MS, MS, PhD
Callen, Jeffrey - BM, MBA, DPhil
Casciaro, Tiziana - BA, MS, PhD
Célérier, Claire - MSc, PhD
Chandra, Ambarish - BMath, MEc, PhD
Chen, Feng - MA, PhD, CGA, CPA
Chen, Ningyuan - BS, MS, PhD
Cheng, Ing-Haw - MEc ***(Academic Director, Master of Financial Risk Management Program)***
Christianson, Marlys - MD, PhD
Christoffersen, Susan - BA, MA, PhD ***(Dean)***
Cire, Andre Augusto - BSc, MSc, PhD
Connelly, Brian Samuel - BA, PhD
Corts, Kenneth - BA, MA, PhD ***(Vice-Dean, Research, Strategy, and Resources)***
Côté, Stéphane - BSc, MA, PhD ***(Director, Faculty Recruiting)***
Davydenko, Sergei - MA, MSc, PhD ***(Academic Director, Master of Finance Program)***
de Bettignies, Jean-Etienne - BSc, MBA, MA, PhD
DeCelles, Katherine - BS, PhD ***(Academic Director, PhD Program)***
Dhuey, Elizabeth Ann - BA, MEc, PhD
Doering, Laura - BA, MA, MA, PhD
Doidge, Craig Andrew - BComm, MSc, PhD ***(Vice-Dean, Faculty)***
Dyck, Alexander - BA, PhD
Edwards, Alexander - BAC, MAcct, MS, PhD
Elitzur, Ramy - BA, MBA, PHM, PhD

Elkamhi, Redouane - BE, MBA, PhD
Feinberg, Matthew - BA, MEd, PhD
Florida, Richard - BA, PhD
Franco, April - BPhil, MEc, PhD
Frazer, Garth - BE, BM, MA, MPH, PhD
Galasso, Alberto - PhD
Gans, Joshua - BEc, PhD
Golden, Brian - BS, MS, PhD ***(Academic Director, Global Executive MBA for Healthcare and the Life Sciences Programs)***
Goldfarb, Avi - BA, MA, PhD
Goldreich, David - BS, MS, MS, PhD
Golubov, Andrey - MSc, PhD
Han, Bing - PhD
Han, Lu - BA, MA, PhD
Hansen, Samantha - BA, MA, PhD
Hawkins, Scott - BA, MS, PhD
Hejazi, Walid - BA, MA, PhD ***(Academic Director, Executive Programs)***
Hirsh, Jacob - BSc, MA, PhD
Hoffman, Mitchell - BA, PhD
Hope, Ole-Kristian - MBA, PhD
Hossain, Tanjim - BA, BS, PhD ***(Chair, Department of Management, UTM)***
Hu, Ming - BS, MS, PhD
Hull, John - BA, MA, MA, PhD
Kan, Raymond - BBA, MBA, DPhil
Kang, Sonia - BSc, MA, PhD
Kaplan, Sarah - BA, MA, PhD
Kramer, Lisa - BBA, PhD
Krass, Dmitry - BS, MEng, PhD
Lacetera, Nicola - PhD
Landry, Peter - BS, MS, PhD
Latham, Gary - BA, MS, PhD
Lederman, Mara - BA, PhD
Lee, Byung Soo - BS, MA, PhD
Lee, Spike - MS, PhD
Leonardelli, Geoffrey - BA, MA, PhD
Liao, Scott - MA, PhD ***(Vice-Dean, Undergraduate and Specialized Programs)***
Lu, Hai - MBA, PhD, PhD
Maglio III, Sam James - AB, PhD
Mahrt-Smith, Jan - BSc, PhD ***(Academic Director, Global Executive MBA Program)***
Malekian, Azarakhsh - BSc, MS, PhD
McCarthy, Julie - BA, MPsy, PhD
McCurdy, Tom - BA, MA, PhD
McEvily, Bill - BS, PhD
McGahan, Anita - BA, MA, MBA, PhD
Mehta, Nitin - BTech, MS, MS, PhD
Milner, Joseph - BSc, MS, PhD ***(Vice-Dean, MBA Programs)***
Mitchell, Matthew - BS, MA, PhD
Mohanram, Partha Sarathy - BTech, MBA, PhD
Moldoveanu, Mihnea - BSc, MSc, DBA
Moorthy, Sridhar - BSc, MBA, MS, PhD
Ornthanalai, Chay - BEng, PhD
Osborne, Matthew James - BA, PhD
Park, Andreas - MEc, MPH, PhD
Reuber, Becky - BA, MSc, PhD
Richardson, Gordon - BA, MBA, PhD, CA
Romero, Gonzalo - BS, BS, PhD
Rotenberg, Wendy - BA, MBA, PhD
Rotundo, Maria - BA, MA, PhD
Rowley, Timothy - BA, MBA, PhD ***(Academic Director, Morning and Evening MBA; Executive MBA Programs)***
Saks, Alan - BA, MSc, PhD
Shalev, Ron - MPH, MA, PhD
Silverman, Brian - AB, MA, SM, PhD
Simutin, Mikhail - BA, PhD
Smieliauskas, Waldemar - BS, MS, PhD
Soberman, David - BSc, MBA, PhD
Soman, Dilip - BE, MBA, PhD
Stark, Andrew - BA, MSc, AM, PhD
Strange, William - BA, MA, PhD
Tilcsik, András - AB, AM, PhD
Toh, Soo Min - BBA, PhD
Tombak, Mihkel - BS, MBA, AM, PhD
Trefler, Daniel - BA, MPH, PhD
Trougakos, John Peter - BS, MBA, PhD
Tsai, Claire - BBA, MBA, PhD ***(Academic Director, Full-Time MBA Program)***
Virag, Gabor - BA, MA, PhD
Vyas, Dushyantkumar - PhD
Wahid, Aida - BA, MA, PhD
Wang, Kevin - BS, MA, PhD
Webb, Ryan - BA, MA, PhD
Wei, Jason - BSc, MBA, PhD
Whyte, Glen - LLB, MA, MBA, MPH, PhD
Wong, Franco - BA, MA, PhD
Xie, Jia Lin - BA, MBA, PhD
Xin, Baohua - PhD
Yang, Liyan - BA, MA, PhD
Ye, Minlei - PhD
Zhang, Ping - BA, MA, MAcct, PhD
Zhong, Chenbo - BA, MA, PhD
Zweig, David - BA, MASc, DPhil

Members Emeriti

Amburgey, Terry - BS, MA, PhD
Berman, Oded - BA, PhD
Borins, Sandford - BA, PhD
Brean, Donald J.S. - BA, MBA, MSc, PhD
Dobson, Wendy - BScN, MPA, SM, PhD
Dungan, D. Peter - BA, MA, PhD
Fisher, James - BA, MBA
Fleck, James - BA, DBA
Halpern, Paul - BCom, MBA, PhD
Horstmann, Ignatius - BA, PhD
Hyatt, Douglas - BA, MA, PhD
Kirzner, Eric - BA, MBA
Kolodny, Harvey - BEng, MBA, PhD
Martin, Roger - AB, MBA
Menzefricke, Ulrich - MBA, DBA
Mitchell, Andrew - BA, PhD
Ondrack, Daniel - BComm, MBA, PhD
Oxley, Joanne - BSc, MA, MBA, PhD
Pauly, Peter - MA, PhD
Ryall, Michael - BS, MBA, PhD
Verma, Anil - BTech, MBA, PhD
Wensley, Anthony - MA, MA, MBA, PhD
White, Alan - BEng, MBA, PhD
Wilson, Thomas - BA, AM, PhD

Associate Members

Akchurina, Dinara - MA
Barjesteh, Nasser - BS, MCS, MS, PhD
Bountali, Olga - BSc, MSc, PhD
Catapano, Rhia - BS, PhD
Cavenaile, Laurent Xavier C. - MA, MSc, PhD
Chan, Cindy - BA, MS, PhD
Corhay, Alexandre - BCom, MSc, PhD
Derksen, Laura - BSc, MSc, PhD
Dimitriadis, Stefan - BA, MPH, AM, PhD
Down, Andrea - BA, MSc, PhD

Duke, Kristen - BA, PhD
Gaetani, Ruben - BA, MA, MSc, PhD
Gillezeau, Robert - BA, MA, PhD
Goetz, Daniel Thomas - BA, MA
Gopalakrishna, Goutham - DSc
Grewal, Jody - BA, MA
Inostroza Padilla, Nicolas - BS, MA, MA, PhD
Jiang, Hansheng - BM, DPhil
Jin, Yizhou - BA, MA, PhD
Khapko, Mariana - BEc, MA, PhD
Kim, Daehyun - PhD
Knight, Samsun - DSc
Lee, Chang-Yuan - MEc
Li, Nan - BA, MA, MBA, PhD
Liu, Shannon - BS, BA, PhD
Liu, Sheng - BS, PhD
Manning, Ryann - BA, MA, PhD
Martineau, Charles - BComm, MSc, PhD
McElheran, Kristina - BA, AB, AM, PhD
Medina Quispe, Pamela Milagros - BA, MA, PhD
Nozawa, Yoshio - BA, MBA, PhD
Odziemkowska, Katarzyna - MFS
Park, Sae-Seul - BBA, MISt
Reiter, Nayana - BBA, MSc, PhD
Ruttan, Rachel - BA, MS, PhD
Seibel, Regina - MEc
Sekar, Shreyas - BA, PhD
Senderovich, Arik - PhD
Shin, Jee-Eun - BA, MS
Sood, Aradhya - BA, MA, PhD
Steck, Andrew Lewis - BA, MA, PhD
Tan, Eugene - BS, BS, PhD
Tong, Jincheng - BSc, MS, PhD
Xu, Ting - MEc
Yi, Irene - BBA, PhD
Yoo, Hyesung - BA, MA, MA, PhD
Yu, Yue - BA, PhD
Zhong, Zachary - PhD

Management, Tri-campus: Management PhD

The Graduate Department of Management offers a world-class doctoral program. Applicants may enter the PhD program via one of two routes: 1) following completion of an appropriate master's degree or 2) direct entry following completion of a bachelor's degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants to all fields must also satisfy the Rotman School's additional admission requirements stated below.
- Some depth in the cognate disciplines relevant to the field is required.
- These requirements may be satisfied prior to entry to the PhD program through an MBA degree program coupled with a relevant undergraduate degree, or through an undergraduate degree in business, management, or commerce coupled with a discipline-based master's degree.
- If the depth requirements are completed prior to entry to the PhD program, then the student is expected to complete the program in four years. If additional coursework is required, then the student may need an additional year to complete the program.
- Applicants should provide:
  - transcripts from each post-secondary institution attended
  - a letter of intent for applying to the PhD program
  - an updated curriculum vitae (CV)
  - two reference letters
  - a valid GMAT or GRE score (optional)
  - proof of English-language proficiency, if applicable.

Completion Requirements

- Students are expected to be qualified in the three basic disciplines essential to the study of management: economics, behavioural science, and quantitative analysis/statistics.
- Students in all fields normally complete **coursework in one field and two areas of study** during Years 1 and 2. In subsequent years of study, students concentrate on deepening knowledge through additional coursework and on generating unprecedented insights through research that culminates in a written doctoral thesis.
- **Coursework**. Students must complete a minimum of **4.5 full-course equivalents (FCEs)** to satisfy requirements for one field and two areas of study.
  - A minimum of 2.0 FCEs comprise the field. These will normally be taken from 3000-level Management courses, but additional courses from other departments may be required.
  - 2.0 FCEs: courses in the two areas of study are usually taken in cognate departments. Each area of study comprises at least 1.0 FCE.
  - Upon completion of the courses, students are expected to pass **comprehensive examinations** in the field.
  - Successful completion of the required course RSM3080H *Research Methods in Business*.
- A **thesis** embodying the results of original investigation must be submitted and defended at a **Doctoral Final Oral Examination** in accordance with the regulations of the School of Graduate Studies.
- During all years of study, students must maintain **residency**, whereby students are on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants to all fields must also satisfy the Rotman School's additional admission requirements stated below.
- Some depth in the cognate disciplines relevant to the field of study is required.
- These requirements may be satisfied prior to entry to the PhD program through an MBA degree program coupled with a relevant undergraduate degree, or through an undergraduate degree in business, management, or commerce coupled with a discipline-based master's degree.
- If the depth requirements are completed prior to entry to the PhD program, then the student is expected to complete the program in five years. If additional coursework is required, then the student may need an additional year to complete the program.
- In exceptional cases, and at the discretion of the Rotman School, admission to the program by direct entry may be approved for applicants with an appropriate bachelor's degree with high standing (a least an A- average in courses relevant to the discipline) from a recognized university.
- Applicants should provide:
  - transcripts from each post-secondary institution attended
  - a letter of intent for applying to the PhD program
  - an updated curriculum vitae (CV)
  - two reference letters
  - a valid GMAT or GRE score (optional)
  - proof of English-language proficiency, if applicable.

Completion Requirements

- Students are expected to be qualified in the three basic disciplines essential to the study of management: economics, behavioural science, and quantitative analysis/statistics.
- Students in all fields normally complete **coursework in one field and two areas of study** during Years 1 and 2. In subsequent years of study, students concentrate on deepening knowledge through additional coursework and on generating unprecedented insights through research that culminates in a written doctoral thesis.
- **Coursework**. Students must complete a minimum of **6.5 full-course equivalents (FCEs)** to satisfy requirements for one field and two areas of study. Direct-entry students must complete 2.0 of the 6.5 FCEs within Year 1.
  - A minimum of 2.0 FCEs in the field. These will normally be taken from 3000-level Management courses, but additional courses from other departments may be required.
  - 2.0 FCE: courses in the two areas of study are usually taken in cognate departments. Each area of study comprises at least 1.0 FCE.
  - An additional 2.0 FCEs in any field related to the student's program of study.
  - Upon completion of the courses, students are expected to pass **comprehensive examinations** in the field.
  - Successful completion of the required course RSM3080H *Research Methods in Business*.
- A **thesis** embodying the results of original investigation must be submitted and defended at a **Doctoral Final Oral Examination** in accordance with the regulations of the School of Graduate Studies.
- During all years of study, students must maintain **residency**, whereby students are on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Management, Tri-campus: Management PhD Courses

The department should be consulted at the onset of each session as to course offerings.

Courses Normally Restricted to PhD Students

Course Code	Course Title
RSM3001H	Research Methods in Strategic Management
RSM3002H	Advanced Topics in Strategy and Organization
RSM3003H	Advanced Topics in Strategy and Economics
RSM3005H	Strategic Management Workshop
RSM3010H	Special Topics in the Economics of Technology and Innovation
RSM3011H	Advanced Topics in the Theory of Industrial Organization
RSM3012H	Advanced Topics in Urban and Real Estate Economics
RSM3013H	Workshop in Economics
RSM3020H	Financial Accounting: Theory and Empirical Research
RSM3021H	Managerial Accounting Research Methods
RSM3022H	Auditing Seminar
RSM3023H	Topics in Accounting Research
RSM3025H	Workshop in Accounting
RSM3029H	Special Topics in Accounting
RSM3030H	Financial Theory I
RSM3031H	Financial Theory II
RSM3032H	Empirical Methods in Finance

Course Code	Course Title
RSM3033H	Current Topics in Finance
RSM3034H	Capital Markets Workshop
RSM3041H	Seminar in Operations Management
RSM3045H	Advanced Topics in Operations Management I
RSM3046H	Advanced Topics in Operations Management II
RSM3049H	Special Topics in Operations Management
RSM3051H	Marketing Theory I: Consumer Behaviour
RSM3052H	Marketing Theory II: Strategy
RSM3053H	Behavioural Research Methods in Marketing
RSM3054H	Current Topics in Consumer Behaviour
RSM3055H	Econometric Methods in Marketing
RSM3056H	Current Topics in Marketing Strategy
RSM3057H	Workshop in Marketing
RSM3058H	The Psychology of Judgement and Decision Making
RSM3059H	Special Topics in Marketing
RSM3060H	Advances in Human Resource Management
RSM3062H	Methods and Research in Organizational Behaviour
RSM3064H	Advanced Topics in Organizational Behaviour
RSM3065H	Meso Organizational Behaviour
RSM3066H	Quantitative Methods in the Applied Behavioural Sciences
RSM3067H	Organizational Behaviour and Human Resources Management Seminar
RSM3069H	Special Topics in Organizational Behaviour and Human Resources Management
RSM3080H	Research Methods in Business
RSM3090H	Reading Course in Approved Field
RSM3090Y	Reading Course
RSM3091H	Reading Course in Approved Field

Management, University of Toronto Scarborough

Management, University of Toronto Scarborough: Introduction

Faculty Affiliation

Management, University of Toronto Scarborough

Degree Programs

Accounting and Finance

MAccFin

- Emphases:
  - Canadian Accounting and Finance;
  - International Accounting and Finance

Overview

The **Master of Accounting and Finance (MAccFin)** is the first program of its kind in North America. The MAccFin delivers a world-class, practical education experience that prepares students for careers in professional practice, corporate management, financial services, consulting, and entrepreneurship. MAccFin students are prepared for the Canadian Chartered Professional Accountant (CPA) or Association of Chartered Certified Accountants (ACCA) and Chartered Financial Analyst (CFA) designations. Students are also offered a co-op internship to incorporate paid work experience into their academic studies. The program caters to students who aspire to leverage the interconnectedness of accounting and finance to become leaders in the global business world.

Contact and Address

Web: www.uoft.me/maccfin
Email: maccfin.utsc@utoronto.ca
Telephone: (416) 208-5098

Graduate Department of Management
University of Toronto Scarborough
1095 Military Trail
Toronto, Ontario M1C 1A4
Canada

Management, University of Toronto Scarborough: Graduate Faculty

Full Members

Franco, April - BPhil, MEc, PhD ***(Chair)***

Management, University of Toronto Scarborough: Management MAccFin

The professional **Master of Accounting and Finance (MAccFin)** degree program is offered over 16 months using a cohort-based model. In this four-session program, students must be registered full-time and complete a sequence of courses. This program begins in the Summer session.

The MAccFin program is designed for applicants who have not yet entered the workforce. These pre-experience applicants apply to the program during, immediately, or shortly after completing their undergraduate degree. Applicants complete the School of Graduate Studies online admissions application and submit all official transcripts, two reference letters, and a resumé.

Master of Accounting and Finance

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the additional admission requirements stated below.
- An appropriate four-year undergraduate degree with a specialization in accounting or finance or equivalent, with a minimum overall average of a mid-B in all core courses. Admission to the program is extremely competitive, and meeting the minimum overall average does not guarantee admission.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction is not English must achieve:
  - A Test of English as a Foreign Language (TOEFL) score of at least 580 overall on the paper-based test and 5 on the Test of Written English (TWE); 100/120 on the Internet-based test and 22/30 on the writing and speaking sections.
  - In special circumstances, a minimum score of 7.0 on the International English Language Testing System (IELTS) may be considered for admission.
- Applicants who plan to pursue the Canadian Chartered Professional Accountant (CPA) designation upon completing the MAccFin must meet the undergraduate prerequisite requirements set out by CPA Canada for entry into the CPA Professional Education Program. Please contact the Graduate Department of Management for details.

- Applicants who plan to pursue the Association of Chartered Certified Professional Accountants (ACCA) designation upon completing the MAccFin must meet the undergraduate prerequisite requirements for at least the Applied Knowledge Level as set out by ACCA. Please contact the Graduate Department of Management for details.

Completion Requirements

- **Coursework**. Students must successfully complete a total of **8.5 full-course-equivalents (FCEs)*** as follows:
  - 7.5 FCEs in required core courses
    - MAF1001H *Advanced Topics in Financial Reporting*
    - MAF1002H *Strategy, Governance, and Management Accounting*
    - MAF1003H *Advanced Topics in Assurance*
    - MAF1004H *Advanced Taxation*
    - MAF2001H *Economics and Quantitative Methods*
    - MAF2002H *Advanced Corporate Finance*
    - MAF2003H *Investment Analysis and Portfolio Management I*
    - MAF2004H *Financial Statement Analysis and Equity Valuation*
    - MAF2005H *Derivatives*
    - MAF2006H *Investment Analysis and Portfolio Management II*
    - MAF2007H *Fixed Income*
    - MAF3001H *Leadership in the 21st Century*
    - MAF3002H *Strategy, Business Development, and Sales*
    - MAF3003H *Business Data Analytics*
    - MAF3005H *Integration and Analysis: Critical Thinking and Decision Making I*
    - MAF3006H *Integration and Analysis: Critical Thinking and Decision Making II*
    - MAF4000H *Co-op Internship*
    - MAF4001H *Advanced Seminar in Accounting and Finance I: Work-Integrated Learning and Career Development*
    - MAF5002H *Finance Capstone Course*
- 1.0 FCE: students must declare an emphasis as part of their degree program.
- Students who plan to pursue the CPA designation upon completing the MAccFin must
  - complete the emphasis in Canadian Accounting and Finance;
  - achieve a minimum mid B grade in MAF1001H, MAF1002H, MAF1003H, MAF1004H, MAF3005H, MAF3006H, or otherwise receive a letter of permission from the Graduate Department of Management.
- Students who plan to pursue the ACCA designation upon completing the MAccFin must
  - complete the emphasis in International Accounting and Finance.

* A final grade below 70% in any course equates to an FZ, which is an insufficient grade. A MAccFin student who receives a final grade of FZ will be recommended for termination of registration from the MAccFin program.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: S-FWS)
Time Limit: 3 years full-time

Management, University of Toronto Scarborough: Emphases

Canadian Accounting and Finance

Participating Programs:

- Management MAccFin

Students must successfully complete **1.0 full-course equivalent (FCE)** as follows:

- MAF1005H *Current Issues in Accounting and Assurance*
- MAF3004H *Integration and Analysis: Board Report*
- MAF4002H *Technical Update in Assurance and Taxation*
- MAF5001H *Technical Update in Financial and Management Accounting*
- MAF5004H *Integrated Case Writing*.

International Accounting and Finance

Participating Programs:

- Management MAccFin

Students must successfully complete **1.0 full-course equivalent (FCE)** as follows:

- MAF3007H *Strategic Business Reporting*
- MAF3008H *Strategic Business Leadership*
- MAF5005H *Advanced Seminar in Accounting and Finance II*
- MAF5006H *Advanced Seminar in Accounting and Finance III*
- MAF5007H *Advanced Seminar in Accounting and Finance IV*.

Materials Science and Engineering

MSE: Introduction

Faculty Affiliation

Applied Science and Engineering

Degree Programs

Materials Science and Engineering

MASc

- Emphasis:
  - Sustainable Energy

MEng

- Emphases:
  - Advanced Manufacturing;
  - Advanced Soft Materials;
  - Advanced Water Technologies;
  - Biomanufacturing;
  - Data Analytics and Machine Learning;
  - Engineering and Globalization;
  - Entrepreneurship, Leadership, Innovation and Technology in Engineering (ELITE);
  - Forensic Engineering;
  - Sustainable Energy

PhD

- Emphasis:
  - Sustainable Energy

Collaborative Specializations

The following collaborative specialization is available to students in participating degree programs as listed below:

- **Biomedical Engineering** (admissions have been administratively suspended)
  - Materials Science and Engineering, MASc, PhD
- **Neuromodulation**
  - Materials Science and Engineering, MASc, PhD

Overview

Climate change, energy availability, and resource depletion are today's global challenges. The Department of Materials Science and Engineering (MSE) is at the forefront of addressing these issues. MSE's research, education, and applications expertise in advanced materials engineering enables the development of new and sustainable technologies, creating innovative solutions for the global environment. As a world leader in materials applications and processing, the department's commitment to excellence fosters innovative thinking in its students, leading to the development of brilliant minds and ideas that make a global impact.

MSE research and studies address the general problem of understanding structure-property-processing-performance relationships in materials. Materials science subjects focus on the structure, properties, and application of advanced materials in areas such as: Advanced Manufacturing & Coating Techniques; Adaptive Materials; Biomaterials & Biotechnology; Computational Materials Engineering; Electronic Materials & Systems; Materials Fracture & Failure; Nanomaterials & Nanotechnology; Optoelectronics; Photovoltaics; Process Metallurgy; Surface Engineering; and Sustainable Mineral & Materials Processing.

Leading-edge research facilities house 11 electron microscopy and surface characterization instruments in the Ontario Centre for the Characterization of Advanced Materials (OCCAM) and five new analytical instruments in the Walter Curlook Materials Characterization & Processing Laboratory, where graduate students learn from world-renowned researchers.

Contact and Address

Web: mse.utoronto.ca
Email: mse.graduate@utoronto.ca
Telephone: (416) 978-3012
Fax: (416) 978-4155

Department of Materials Science and Engineering
University of Toronto
Wallberg Building, Room 140, 184 College Street
Toronto, Ontario M5S 3E4 Canada

MSE: Graduate Faculty

Full Members

Azimi, Gisele - BASc, MASc, PhD
Barati Sedeh, Mansoor - BSc, MASc, PhD
Coyle, Tom - BS, BA, ScD
Goh, M. Cynthia - PhD
Grynpas, Marc - MSc, PhD
Hatton, Benjamin - BASc, MASc, PhD ***(Associate Chair, Graduate Studies)***
Hattrick-Simpers, Jason - BS, PhD
Hibbard, Glenn - BASc, PhD
Howe, Jane - PhD
Kherani, Nazir - BASc, MASc, PhD
Lu, Zheng-Hong - BSc, MSc, PhD
Matsuura, Naomi - ME, PhD

Naguib, Hani - BSc, ME, PhD, PEng ***(Chair and Graduate Chair)***
Nogami, Jun - BASc, MASc, PhD
Perovic, Doug - BASc, MASc, PhD
Ramsay, Scott - BASc, MASc, PhD
Ruda, Harry - BSc, PhD
Singh, Chandra Veer - BASc, MTech, PhD ***(Associate Chair, Research)***
Sone, Eli - BSc, MS, PhD
Thorpe, Steven - BASc, MASc, PhD
von Lilienfeld Toal, Anatole - PhD
Wang, Zhirui - BEng, BEng, MASc, PhD

Members Emeriti

Erb, Uwe - MSc, PhD
Lian, Keryn - BE, MASc, MSc, PhD
Mclean, Alexander - BSc, PhD
Pilliar, Robert - BASc, PhD
Sommerville, Iain - BSc, PhD, ARCS

Associate Members

Dai-Hattrick, Liyang - BS, MASc, PhD

MSE: Materials Science and Engineering MASc

The **Master of Applied Science (MASc)** program provides students with an opportunity to pursue advanced study and research with the guidance of experts in their respective fields. Studying in a chosen area of specialty and developing skills through hands-on experience in the MSE world-class labs provides students with the ability to either pursue PhD studies or to move out into industry with enriched skills and knowledge. This full-time program demands commitment and passion for research in materials engineering. For those interested in continuing to PhD-level research, successful completion of the MASc is the normal route.

Master of Applied Science

Minimum Admission Requirements

- Students are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Materials Science and Engineering's additional admission requirements stated below.
- For students whose primary language is not English, the department requires a Test of English as a Foreign Language (TOEFL) with the following minimum scores:
  - Paper-based TOEFL: minimum score of 580 and 4 on the Test of Written English (TWE)
  - Internet-based TOEFL: minimum score of 93/120 and 22/30 on the writing and speaking sections.

Completion Requirements

- **Coursework.** The program of study normally includes 2.0 full-course equivalents (FCEs) (four half courses), including:
  - MSE1000H, the mandatory weekly *Graduate Research Seminar MASc*
  - Three half courses (1.5 FCEs), one of which must be chosen from the list of MSE graduate course offerings.
- JDE1000H *Ethics in Research*, a non-credit graduate **ethics seminar**.
- The required **thesis** is based upon research work carried out in the department. The thesis must be presented at an **oral examination**.
- Students have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Materials Science and Engineering MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

MSE: Materials Science and Engineering MEng

The **Master of Engineering (MEng)** program has been developed for recent graduates who wish to pursue graduate-level studies but may not be interested in continuing to the PhD program. This program is also intended for working engineers who wish to augment their current knowledge and add to their credentials. The multidisciplinary nature of materials engineering and the coursework-only and coursework-plus-project options enable students to build personalized programs which best suit their individual interests and needs. The MSE MEng is recognized and respected by employers globally and can enhance and enrich the career opportunities of graduates.

The MEng program can be taken on a full-time, extended full-time, or part-time basis.

MEng Program (Full-Time and Part-Time Options)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Materials Science and Engineering's additional admission requirements stated below.
- For students whose primary language is not English, the department requires a Test of English as a Foreign Language (TOEFL) with the following minimum scores:
  - Paper-based TOEFL: minimum score of 580 and 4 on the Test of Written English (TWE)

- Internet-based TOEFL: minimum score of 93/120 and 22/30 on the writing and speaking sections.

Completion Requirements

- For students with adequate undergraduate preparation, the normal program will include **5.0 full-course equivalents (FCEs)** (10 half courses). A project may be substituted for 1.5 FCEs (3 half courses). Students enrolled in this option work in consultation with a professor who acts as advisor for the project undertaken. An oral presentation of the project may be required.
- Full-time students normally complete the requirements in three sessions (one year).
- Part-time students normally complete the requirements in nine sessions (three years). The limit is four half courses per year and two half courses per session.
- Full-time MEng students may transfer to the research-stream MASc program if they meet all of the following criteria:
  - The request to transfer must be submitted at the beginning of the second session of enrolment. For example, students enrolled in September must successfully complete 1.5 FCEs (three half courses), technical courses of which at least one must be from MSE, with a B+ or 78% average. The technical courses taken during the MEng program will be credited toward the MASc program.
  - Have a supervisor who is willing to provide funding for an MASc research project starting in the second session of enrolment.
- Students have the option of completing an emphasis in Advanced Manufacturing; Advanced Soft Materials; Advanced Water Technologies; Biomanufacturing; Data Analytics and Machine Learning; Engineering and Globalization; Entrepreneurship, Leadership, Innovation and Technology in Engineering (ELITE); Forensic Engineering; or Sustainable Energy as part of their degree program. Please see details in the Materials Science and Engineering Emphases section.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 9 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MEng Program (Extended Full-Time Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Materials Science and Engineering's additional admission requirements stated below.
- For students whose primary language is not English, the department requires a Test of English as a Foreign Language (TOEFL) with the following minimum scores:
  - Paper-based TOEFL: minimum score of 580 and 4 on the Test of Written English (TWE)
  - Internet-based TOEFL: minimum score of 93/120 and 22/30 on the writing and speaking sections.

Completion Requirements

- For students with adequate undergraduate preparation, the normal program will include **5.0 full-course equivalents (FCEs) (10 half courses)**. A project may be substituted for 1.5 FCEs (3 half courses). Students enrolled in this option work in consultation with a professor who acts as advisor for the project undertaken. An oral presentation of the project may be required.
- Students are expected to complete the requirements in six sessions (two years). The limit is six half courses per year and three half courses per session.
- Full-time MEng students may transfer to the research-stream MASc program if they meet all of the following criteria:
  - The request to transfer must be submitted at the beginning of the second session of enrolment. For example, students enrolled in September must successfully complete 1.5 FCEs (three half courses), technical courses of which at least one must be from MSE, with a B+ or 78% average. The technical courses taken during the MEng program will be credited toward the MASc program.
  - Have a supervisor who is willing to provide funding for an MASc research project starting in the second session of enrolment.
- Students have the option of completing an emphasis in Advanced Manufacturing; Advanced Soft Materials; Advanced Water Technologies; Biomanufacturing; Data Analytics and Machine Learning; Engineering and Globalization; Entrepreneurship, Leadership, Innovation and Technology in Engineering (ELITE); Forensic Engineering; or Sustainable Energy as part of their degree program. Please see details in the Materials Science and Engineering Emphases section.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

MSE: Materials Science and Engineering PhD

Pursuing a **Doctor of Philosophy (PhD) degree**, the most advanced research degree in the Faculty of Applied Science and Engineering, can be a stepping stone to an academic career or to an industrial career which would benefit from in-depth applied research and research skills. Under the guidance of an accomplished supervisor, PhD students engage in original research that contributes to a variety of fields of study. Four years of PhD study allowing students to collaborate with local and international colleagues culminates in a written thesis which is presented orally and evaluated by experts. This is a degree program for outstanding students.

Applicants may enter the PhD program via one of three routes: 1) following successful completion of an MASc degree; 2) transfer from the University of Toronto MASc program to continue work that was begun at that level; or 3) direct entry following completion of an appropriate bachelor's degree.

The program can also be taken on a flexible-time basis.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Materials Science and Engineering (MSE)'s additional admission requirements stated below.
- Students are normally expected to have completed a master's-level program before entering the PhD program.
- For students whose primary language is not English, the department requires a Test of English as a Foreign Language (TOEFL) with the following minimum scores:
  - Paper-based TOEFL: minimum score of 580 and 4 on the Test of Written English (TWE)
  - Internet-based TOEFL: minimum score of 93/120 and 22/30 on the writing and speaking sections.

Completion Requirements

- The primary subject in a program will be extractive and process metallurgy, physical metallurgy, or materials science.
- **Coursework.** The program of study normally includes **2.0 full-course equivalents (FCEs)** (four half courses), including the weekly Graduate Research Seminar, and a thesis. The coursework selected normally includes:
  - MSE2000H *Graduate Research Seminar PhD*.
  - Three half courses (1.5 FCEs), at least one of which must be chosen from the list of MSE graduate course offerings.
  - The departmental seminar, comprising a minimum of two seminars presented to the academic staff and students of MSE.
- Students must complete the seminar JDE1000H *Ethics in Research*, a non-credit course.
- A general **Qualifying Examination** must be scheduled and taken within 12 months of initial registration. In case of failure, one further attempt within 3 months is allowed, no later than within 15 months of initial registration. No further attempts are permitted. In order to take this examination, students must complete all required coursework except for the *Graduate Research Seminar PhD*.
- The Qualifying Examination consists of:
  - A report (25 to 30 pages) of research to date, in the form of a dossier.
  - A presentation (20 to 25 minutes) summarizing research, with particular emphasis on providing a critical assessment of the literature in the field, a central hypothesis of thesis, proposed methodology, and recent experimental progress.
  - An oral examination, immediately following the presentation, by the Qualifying Examination committee who will ask the candidate questions pertaining to either the presented material, or related questions in materials science. The student is expected to have a working-level knowledge of the fundamentals of materials science as it pertains to the proposed area of research, and on a broader basis, at the level of a second-year undergraduate student in Materials Science.
- The required **thesis** is based upon research work carried out in the department in the areas of extractive and process metallurgy, physical metallurgy, or materials science.
- Students have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Materials Science and Engineering MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- Very strong MASc students may apply to transfer to the PhD program after completing one year of the MASc program. Regulations governing such transfers are available in the MSE Graduate Studies office.

Completion Requirements

- The primary subject in a program will be extractive and process metallurgy, physical metallurgy, or materials science.
- **Coursework.** The program of study normally includes **2.5 full-course equivalents (FCEs)**, including the weekly Graduate Research Seminar PhD, and a thesis. The coursework selected normally includes:
  - Three half courses (1.5 FCEs) from the MASc program.
  - MSE2000H *Graduate Research Seminar PhD*.
  - An additional 0.5 graduate FCE.
- A general **Qualifying Examination** must be scheduled and taken within 12 months of initial registration. In case of failure, one further attempt within 3 months is allowed, no later than within 15 months of initial registration. No further attempts are permitted. In order to take this examination, students must complete all required coursework except for the *Graduate Research Seminar PhD*. The Qualifying Examination consists of:
  - A report (25 to 30 pages) of research to date, in the form of a dossier.
  - A presentation (20 to 25 minutes) summarizing research, with a particular emphasis on providing a critical assessment of the literature in the field, a central hypothesis of the thesis, proposed methodology, and recent experimental progress.

    - An oral examination, immediately following the presentation, by the Qualifying Examination committee who will ask the candidate questions pertaining to either the presented material, or related questions in materials science. The student is expected to have a working-level knowledge of the fundamentals of materials science as it pertains to the proposed area of research, and on a broader basis, at the level of a second-year undergraduate student in Materials Science.
- The required **thesis** is based upon research work carried out in the department in the areas of extractive and process metallurgy, physical metallurgy, or materials science.
- Students have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Materials Science and Engineering MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Materials Science and Engineering (MSE)'s additional admission requirements stated below.
- Exceptionally strong BASc students with an average grade of A– over the final four sessions of undergraduate studies (excluding Summer sessions in some cases) may be considered for direct entry to the PhD program.
- For students whose primary language is not English, the department requires a Test of English as a Foreign Language (TOEFL) with the following minimum scores:
    - Paper-based TOEFL: minimum score of 580 and 4 on the Test of Written English (TWE)
    - Internet-based TOEFL: minimum score of 93/120 and 22/30 on the writing and speaking sections.

Completion Requirements

- The primary subject in a program will be extractive and process metallurgy, physical metallurgy, or materials science.
- **Coursework.** The program of study normally includes **3.0 full-course equivalents (FCEs)** (six half courses), including the weekly *Graduate Research Seminar PhD*, and a thesis. The coursework selected normally includes:
    - MSE2000H *Graduate Research Seminar PhD*.
    - Five half courses (2.5 FCEs), at least two of which must be chosen from the list of MSE graduate course offerings.
- Students must complete the seminar JDE1000H *Ethics in Research*, a non-credit course.
- A general **Qualifying Examination** must be scheduled and taken within 12 months of initial registration. In case of failure, one further attempt within 3 months is allowed, no later than within 15 months of initial registration. No further attempts are permitted. In order to take this examination, students must complete all required coursework except for the *Graduate Research Seminar PhD*. The Qualifying Examination consists of:
    - A report (25 to 30 pages) of research to date, in the form of a dossier.
    - A presentation (20 to 25 minutes) summarizing research, with particular emphasis on providing a critical assessment of the literature in the field, a central hypothesis of thesis, proposed methodology, and recent experimental progress.
    - An oral examination, immediately following the presentation, by the Qualifying Examination committee who will ask the candidate questions pertaining to either the presented material, or related questions in materials science. The student is expected to have a working-level knowledge of the fundamentals of materials science as it pertains to the proposed area of research, and on a broader basis, at the level of a second-year undergraduate student in Materials Science.
- The required **thesis** is based upon research work carried out in the department in the areas of extractive and process metallurgy, physical metallurgy, or materials science.
- Students have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Materials Science and Engineering MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Flexible-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Materials Science and Engineering (MSE)'s additional admission requirements stated below.
- Students must have completed a master's-level program before entering the PhD program.
- For students whose primary language is not English, the department requires a Test of English as a Foreign Language (TOEFL) with the following minimum scores:
    - Paper-based TOEFL: minimum score of 580 and 4 on the Test of Written English (TWE)
    - Internet-based TOEFL: minimum score of 93/120 and 22/30 on the writing and speaking sections.
- Applicants to the flexible-time PhD option are accepted under the same admission requirements as applicants to the full-time PhD option.

Completion Requirements

- The primary subject in a program will be extractive and process metallurgy, physical metallurgy, or materials science.
- Students must complete **2.0 full-course equivalents (FCEs)** (four half courses) as follows:
  - Year 1: 1.0 FCE plus the non-credit seminar JDE1000H *Ethics in Research*.
  - Year 2: 0.5 FCE. Prepare a research proposal and pass the Qualifying Examination.
  - Year 3: Present the first seminar for MSE2000H *Graduate Research Seminar PhD*.
  - Year 4: Research and writing.
  - Year 5: Research and writing. Present the second seminar for MSE2000H.
  - Year 6: Defend the thesis at the Doctoral Final Oral Examination by August 30.
- Students in the flexible-time option are registered full-time during the first four years and part-time during subsequent years in the program.
- The general **Qualifying Examination** must be scheduled and taken within 12 months of initial registration. In case of failure, one further attempt within 3 months is allowed, no later than within 15 months of initial registration. No further attempts are permitted. In order to take this examination, students must complete all required coursework except for the *Graduate Research Seminar PhD*. The Qualifying Examination consists of:
  - A report (25 to 30 pages) of research to date, in the form of a dossier.
  - A presentation (20 to 25 minutes) summarizing research, with particular emphasis on providing a critical assessment of the literature in the field, a central hypothesis of thesis, proposed methodology, and recent experimental progress.
  - An oral examination, immediately following the presentation, by the Qualifying Examination committee who will ask the candidate questions pertaining to either the presented material, or related questions in materials science. The student is expected to have a working-level knowledge of the fundamentals of materials science as it pertains to the proposed area of research, and on a broader basis, at the level of a second-year undergraduate student in Materials Science.
- The required **thesis** is based upon research work carried out in the department in the areas of extractive and process metallurgy, physical metallurgy, or materials science.
- Students have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Materials Science and Engineering MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

MSE: Materials Science and Engineering: Emphases

Advanced Manufacturing

Participating Programs:

- Aerospace Science and Engineering MEng
- Chemical Engineering and Applied Chemistry MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete:

- **Four half courses (2.0 full-course equivalents [FCEs])**, including at least one core course.
- Elective courses may include other core courses, and courses from either of two streams: Manufacturing Engineering and Manufacturing Management.

Core Courses

AER501H1 *Computational Structural Mechanics and Design Optimization*,
AER1403H *Advanced Aerospace Structures*,
APS1028H *Operations and Production Management for Manufacturing and Services*,
CHE1123H *Liquid Biofuels*,
MIE519H1 *Advanced Manufacturing Technologies*,
MIE1740H *Smart Materials and Structures*.

Elective Courses — Manufacturing Engineering

AER1415H,
CHE1134H, CHE1475H,
MIE506H1, MIE540H1, MIE1706H, MIE1709H, MIE1718H, MIE1743H,
MSE1013H, MSE1015H, MSE1028H, MSE1031H, MSE1043H, MSE1058H, MSE1061H,
ROB501H1, ROB521H1.

Elective Courses — Manufacturing Management

APS1012H, APS1013H, APS1017H, APS1020H, APS1023H, APS1088H, APS1420H,
CHE561H1, CHE1434H,
MIE523H1, MIE1022H, MIE1505H, MIE1514H, MIE1715H, MIE1721H, MIE1727H,
TEP1011H, TEP1026H, TEP1501H.

Advanced Soft Materials

Participating Programs:

- Chemical Engineering and Applied Chemistry MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete any **four half courses (2.0 full-course equivalents [FCEs])** from the following list:
CHE562H1, CHE1310H, CHE1333H, CHE1335H, CHE1475H, JTC1134H, JTC1135H,
MIE1705H, MIE1706H, MIE1707H, MIE1740H,
MSE1043H.

Students may double-count one course at most towards any CHE emphasis, or towards any other emphasis in the Faculty.

Advanced Water Technologies

Participating Programs:

- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete a total of **2.0 full-course equivalents (FCEs)** (four half courses).

Core Courses

Students must select at least one of the following (0.5 FCE):

- CHE1150H *Industrial Water Technology*
- CIV1308H *Physical and Chemical Treatment Processes*
- CIV1309H *Biological Treatment Processes*
- CIV1311H *Advanced and Sustainable Drinking Water Treatment*

Students may select an additional course (0.5 FCE) from the list above, **or** they must select one (0.5 FCE) of the following:

- CHE565H1 *Aqueous Process Engineering*
- CIV541H1 *Environmental Biotechnology*
- CIV550H1 *Water Resources Engineering*
- CIV1303H *Water Resources Systems Modeling*
- CIV1319H *Chemistry and Analysis of Water and Wastes*
- CIV1330H *Water, Sanitation, Hygiene, and Global Health*
- CIV1398H *New Topics in Civil and Mineral Engineering*
- CME500H1 *Fundamentals of Acid Rock Drainage*
- CME549H1 *Groundwater Flow and Contamination*.

Specialization Courses

Students must select the remaining balance of courses (1.0 FCE) from the following, or from any of the core courses listed above:

- CHE1213H *Corrosion*
- CHE1430H *Hydrometallurgy Theory and Practice*
- JCC1313H *Environmental Microbiology*
- JNC2503H *Environmental Pathways*.

Enrolment and Completion

Students should contact Alison Morley (meng.civmin@utoronto.ca) to declare their interest, so that they can be notified of water engineering-related events and extracurricular activities.

To receive acknowledgment of the emphasis on their transcript, it is the student's responsibility to declare completion of the emphasis to their home department's graduate program administrator at the same time that they are requesting convocation. The student may also reach out to meng.civmin@utoronto.ca to confirm the completion of the emphasis.

Biomanufacturing

Participating Programs:

- Chemical Engineering and Applied Chemistry MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete any **four half courses (2.0 full-course equivalents [FCEs])** from the following list:
CHE1123H, CHE1125H, CHE1134H, CHE1135H, CHE1334H, CHE1450H, CHE1471H,
JCC1313H,
JTC1331H,
BME1459H, BME1480H.

Students may double-count one course at most towards any CHE emphasis, or towards any other emphasis in the Faculty.

Data Analytics and Machine Learning

Participating Programs:

- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Electrical and Computer Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

To be admitted to the emphasis in Data Analytics and Machine Learning, MEng students must first successfully complete a **prerequisite course APS1070H (0.5 full-course equivalent [FCE])**.

Subsequently, to earn the emphasis, students must successfully complete **four additional half courses (2.0 FCEs)** from the list of core courses or elective courses. These must include at least one core course; the remaining courses must be selected from the list of elective courses.

Students must have completed the prerequisite course APS1070H before taking any of the core courses.

Prerequisite Course

APS1070H *Foundations of Data Analytics and Machine Learning*.

Core Courses

CHE1147H *Data Mining in Engineering*,
ECE1513H *Introduction to Machine Learning*,
MIE1624H *Introduction to Data Science and Analytics*,
MIE1626H *Data Science Methods and Statistical Learning*,
MSE1065H *Application of Artificial Intelligence in Materials Design*.

Elective Courses

APS502H1, APS1005H, APS1017H, APS1022H, APS1050H, APS1051H, APS1052H, APS1053H, APS1080H,
BME1570H,
CEM1002H,
CHE507H1, CHE1108H, CHE1148H, CHE1434H,
CIV1504H, CIV1506H, CIV1507H, CIV1532H, CIV1538H, CIV1599H,
ECE537H1, ECE1504H, ECE1505H, ECE1657H, ECE1779H, ECE1786H,
MIE562H1, MIE1077H, MIE1413H, MIE1501H, MIE1512H, MIE1513H, MIE1517H, MIE1520H, MIE1620H, MIE1621H, MIE1622H, MIE1623H, MIE1625H, MIE1628H, MIE1653H, MIE1666H, MIE1721H, MIE1727H, MIE1769H,
MSE1063H.

Engineering and Globalization

Participating Programs:

- Aerospace Science and Engineering MEng
- Biomedical Engineering MEng
- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Electrical and Computer Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete **four half courses (2.0 full-course equivalents [FCEs])** from the following lists, with at least two half courses (or one full course) taken from Group A.

Group A

APS510H1, APS530H1, APS1420H, JCR1000Y (full-year course).

Group B

APS1015H, APS1020H, APS1024H, CHL5700H, CIV1399H.
Note: Students who choose to pursue an MEng project in their home department that aligns with the Centre for Global Engineering (CGEN)'s disciplinary focus, as deemed by the CGEN Director, may count the project as one required Group B course.

Students who complete the requirements of the emphasis in Engineering and Globalization and wish to obtain a notation on their transcript should contact the Faculty Graduate Studies office.

Entrepreneurship, Leadership, Innovation and Technology in Engineering

Participating Programs:

- Aerospace Science and Engineering MEng
- Biomedical Engineering MEng
- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Electrical and Computer Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete **any four of the following courses (2.0 full-course equivalents [FCEs])**:

Leadership

TEP1010H, TEP1011H, TEP1026H, TEP1027H, TEP1029H, TEP1030H, TEP1501H, TEP1502H, TEP1601H.

Entrepreneurship and Innovation

APS511H1, APS1012H, APS1013H, APS1015H, APS1023H, APS1033H, APS1035H, APS1036H, APS1041H, APS1061H, APS1088H.

Finance and Management

AER1601H, APS500H1, APS502H1, APS1001H, APS1004H, APS1009H, APS1016H, APS1017H, APS1020H, APS1022H, APS1028H, APS1032H, APS1043H, APS1049H, APS1050H, APS1051H, APS1052H.

Engineering and Society

APS510H1, APS1018H, APS1024H, APS1025H, APS1031H, APS1034H, APS1090H, APS1101H, APS1420H.

Forensic Engineering

Participating Programs:

- Biomedical Engineering MEng
- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete **four courses (one core course and three elective courses; 2.0 full-course equivalents [FCEs])**.

Core Course

MSE1031H *Forensic Engineering*.

Elective Courses

AER1604H,
APS1034H, APS1039H, APS1040H, APS1101H,
BME1480H, BME1800H, BME1801H, BME1802H,
CHE561H1, CHE568H1, CHE1213H, CHE1431H, CHE1432H,
CHE1434H, CHE1436H,
CIV510H1, CIV518H1, CIV1163H, CIV1171H, CIV1174H,
CIV1190H, CIV1201H, CIV1279H, CIV1282H, CIV1422H,
CIV1429H,
JMB1050H,
JNC2503H,
MIE507H1, MIE533H1, MIE566H1, MIE1301H, MIE1303H,
MIE1411H, MIE1414H, MIE1514H, MIE1616H, MIE1708H,
MIE1714H, MIE1721H, MIE1727H, MIE1804H,
MSE1015H, MSE1016H, MSE1022H, MSE1032H, MSE1067H.

Sustainable Energy

Participating Programs:

- Aerospace Science and Engineering MASc
- Aerospace Science and Engineering MEng
- Aerospace Science and Engineering PhD
- Chemical Engineering and Applied Chemistry MASc
- Chemical Engineering and Applied Chemistry MEng
- Chemical Engineering and Applied Chemistry PhD
- Civil Engineering MASc
- Civil Engineering MEng
- Civil Engineering PhD
- Electrical and Computer Engineering MASc
- Electrical and Computer Engineering MEng
- Electrical and Computer Engineering PhD
- Mechanical and Industrial Engineering MASc
- Mechanical and Industrial Engineering MEng
- Mechanical and Industrial Engineering PhD
- Materials Science and Engineering MASc
- Materials Science and Engineering MEng
- Materials Science and Engineering PhD

MASc and PhD students must successfully complete:

- At least **three half courses (1.5 full-course equivalents [FCEs])** from either of the following lists below.
- A thesis towards their degree on a topic related to sustainable energy. Topics must be approved by the steering committee of the Institute of Sustainable Energy. Contact: emphasis@cpe.utoronto.ca.

MEng students must successfully complete:

- **Four half courses (2.0 FCEs)** from either of the following lists below, including at least one core course (0.5 FCE).

Core Courses

APS1032H *Introduction to Energy Project Management*,
MIE515H1 *Alternative Energy Systems*,
MIE1120H *Current Energy Infrastructure and Resources*.

Elective Courses

AER507H1, AER1304H, AER1315H, AER1415H,
CHE568H1, CHE1053H, CHE1118H, CHE1123H, CHE1142H,
CHE1143H,
CIV575H1, CIV576H1, CIV577H1, CIV1303H, CIV1307H,
ECE1030H, ECE1055H, ECE1057H, ECE1059H, ECE1085H,
ECE1086H, ECE1092H, ECE1094H, ECE1476H,
MIE516H1, MIE517H1, MIE1128H, MIE1129H, MIE1130H,
MIE1132H, MIE1240H, MIE1241H, MIE1715H,
MSE1023H, MSE1028H, MSE1058H.

Contact

All students are asked to register with Climate Positive Energy (CPE) at emphasis@cpe.utoronto.ca, at the beginning of their studies, to receive information about energy-related activities and opportunities on campus. CPE also administers a number of awards and scholarships for which students may be eligible.

MSE: Materials Science and Engineering MASc, MEng, PhD Courses

A schedule is available on the MSE website at the beginning of the Fall session, listing the time and room location for each course offered in MSE in both the Fall and Winter sessions.

Not all courses are offered every year. Please consult the department for a listing of courses being offered this year.

All students wishing to undertake graduate research in the Department of Materials Science and Engineering must successfully complete a two-day intensive occupational health and safety training program which will normally take place during the week immediately preceding the commencement of graduate courses. More details concerning this course will be provided by the Coordinator of Graduate Studies once admission to a graduate program has been confirmed.

After the initial safety training, all students are required to pass refresher safety training annually.

Materials Science

Course Code	Course Title
MSE1000H	Graduate Research Seminar MASc
MSE1022H	Special Topics in Materials Science I
MSE1023H	Special Topics in Materials Science II
MSE1024H	Interface and Nanophase Engineering
MSE1025H	Special Topics in Materials Science III
MSE1026H	Analytical Electron Microscopy
MSE1028H	Advanced Materials Science
MSE1031H	Forensic Engineering

Course Code	Course Title
MSE1032H	Polymers and Composites Engineering
MSE1034H	Directed Readings in Materials Science and Engineering I
MSE1035H	Optical and Photonic Materials
MSE1036H	Application of Electrochemical Techniques in Materials Science
MSE1037H	Process Metallurgy of Iron and Steel
MSE1038H	Computational Materials Design
MSE1040H	Emerging Applications in Biomaterials
MSE1043H	Composite Materials Engineering
MSE1044H	Directed Readings in Materials Science and Engineering II
MSE1058H	Nanotechnology in Alternate Energy Systems
MSE1061H	Engineered Ceramics
MSE1062H	Materials Physics
MSE1063H	Application of Artificial Intelligence in Process Metallurgy
MSE1064H	Extraction, Production, and Processing of Aluminum
MSE1065H	Application of Artificial Intelligence in Materials Design
MSE1066H	Practical Aspects of Electron Microscopy
MSE1067H	Damage and Failure of Advanced Engineering Materials
MSE1068H	Additive Manufacturing of Metals, Ceramics, and Composites
MSE2000H	Graduate Research Seminar PhD
MSE3000Y	MEng Project
APS1012H	Managing Business Innovation and Transformational Change
APS1043H	Writing Your Own Patent Application
JMB1050H	Biological and Bio-inspired Materials
JTC1135H	Applied Surface Chemistry

Mathematical Finance

Mathematical Finance: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Mathematical Finance

MMF

Overview

Financial engineering is one of the fastest-growing areas of applied mathematics.

Contact and Address

Web: www.mmf.utoronto.ca
Email: math.finance@utoronto.ca
Telephone: (416) 946-5206

Mathematical Finance Program
University of Toronto
Suite 17030, 700 University Avenue
Toronto, Ontario M5G 1Z5 Canada

Mathematical Finance: Graduate Faculty

Full Members

Feuerverger, Andrey - BSc, PhD
Jackson, Kenneth - BSc, MSc, PhD
Jaimungal, Sebastian - BSc, MSc, PhD
Kwon, Roy - BA, MS, MSc, PhD
McCurdy, Tom - BA, MA, PhD
Seco, Luis - PhD

Associate Members

Kreinin, Alexander - MSc, PhD
Pilling, Jason - BSc, MMF
Rosen, Dan - BASc, MASc, PhD
Rubisov, Dmitri - ME, PhD
Tuenter, Johan - BSc, MSc, PhD

Mathematical Finance: Mathematical Finance MMF

In the **Mathematical Finance (MMF) program**, students reshape their existing analytical abilities with the help of senior academics in mathematics, computer science, statistics, and engineering who have experience with the tools of mathematical finance. This cross-disciplinary approach develops graduates with a richer, more innovative approach to applied mathematics in real-world situations. Some of the faculty are seasoned practitioners from the financial industry while others are from leading firms in the financial software industry, developing applications around requirements like risk management, portfolio analysis, and the pricing of advanced derivatives.

The heart of the program is the four-month internship or campus project. Working on real financial projects, students learn to integrate and apply theoretical knowledge gained earlier in the program. In the internship, students team up with employees of the sponsoring firm to experience how financial mathematics impacts the decision-making processes of a financial services organization.

MMF Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the graduate unit's additional admission requirements stated below.
- Applicants must have an appropriate bachelor's degree in a quantitative, technical discipline with a minimum of a mid-B standing in the final two years.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction was not English must demonstrate proficiency in the English language through the successful completion of the Test of English as a Foreign Language (TOEFL) with minimum scores as follows:
  - paper-based TOEFL exam: 580 and 5 on the Test of Written English (TWE)
  - Internet-based TOEFL exam: 93/120 and 22/30 on the writing and speaking sections
- Applicants must also show evidence of strong mathematical ability. Appropriate workplace experience will be considered in lieu of formal education.
- Admission to the program is competitive. Those accepted into the program will normally have achieved a standing considerably higher than the minimum mid-B standing or have demonstrated exceptional ability through appropriate workplace experience.
- Applicants must satisfy the Admissions Committee of their ability to do rigorous quantitative analysis at an advanced level. The broad background required for this program makes it likely that many strong applicants will not possess all the background requirements. It is expected that applicants will have extra depth in certain areas and need to do additional work in others. Admission may be conditional upon the applicant's satisfactory completion of the required background material.

- Applicants should submit a written statement of approximately 300 words outlining their objectives for entering the program. Applicants should also explain how their background is appropriate. An interview may be required.
- Inquiries about part-time options for the program should be addressed to the Program Director.

Completion Requirements

- The program of study begins in mid-August and includes a four-month internship during the second session. Students will be responsible for obtaining their own internship. In cases where the student is taking a leave of absence from an appropriate job, it is expected that the student will return to this job for the internship. In all cases, the Director must approve the placement.
- Students will proceed through the program as a group, following a common course of study. The course of study will be fully integrated and computer-laboratory intensive. Course projects and assignments will be designed to integrate the material learned from a variety of the courses and to utilize it in a practical context. Excellent communication and presentation skills will be emphasized in both the oral and written components of the projects.
- Students must complete all required courses listed below:
  - MMF1900Y *Internship*
  - MMF1910H *Introduction to Financial Industry*
  - MMF1914H *Information Technology*
  - MMF1920H *Investment and Finance*
  - MMF1921H *Operations Research*
  - MMF1922H *Data Science Methods for Investment, Finance, and Risk Management*
  - MMF1923H *Financial Markets and Corporate Policy*
  - MMF1927H *Workshop in Mathematical Finance*
  - MMF1928H *Pricing Theory 1*
  - MMF1929H *Asset Management*
  - MMF1941H *Dynamic Data Science in Finance*
  - MMF1943Y *Communication*
  - MMF2000H *Risk Management*
  - MMF2012H *Financial Modelling*
  - MMF2021H *Numerical Methods for Finance*
  - MMF2025H *Risk Management Laboratory*
  - MMF2028H *Blockchain Fundamentals for Finance*
  - MMF2030H *Machine Learning for Finance*
  - MMF2032H *Innovation and Entrepreneurship*
  - MMF2034H *Climate Risk Management in Finance*.
- Additional courses:
  - MMF1915H *Introduction to Financial Products*
  - MMF1926H *Workshop in Mathematical Finance*.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

Mathematical Finance: Mathematical Finance MMF Courses

Courses are offered in modules. A module will consist of a four-week unit with a minimum of three contact hours per week, or its equivalent. A large portion of the learning for the module will take place outside of class through carefully designed computer projects and group study. The courses have been packaged in units of one, two, three, four, or five modules, and the course weight will be equal to the number of modules; for example, a course with three modules will have a weight of three credit hours. Six modules will be considered the equivalent of one full-course equivalent in a standard format. The third digit of the four-digit course number determines the course weight.

Third Digit Notation

1 = one-third of a half course
2 = two-thirds of a half course
3 = one half course
4 = two-thirds of a full course
5 = one full course

Required Courses

Course Code	Course Title
MMF1900Y	Internship
MMF1910H	Introduction to Financial Industry
MMF1914H	Information Technology
MMF1920H	Investment and Finance
MMF1921H	Operations Research
MMF1922H	Data Science Methods for Investment, Finance, and Risk Management
MMF1923H	Financial Markets and Corporate Policy
MMF1927H	Workshop in Mathematical Finance
MMF1928H	Pricing Theory 1
MMF1929H	Asset Management
MMF1941H	Dynamic Data Science in Finance
MMF1943Y	Communication
MMF2000H	Risk Management
MMF2012H	Financial Modelling
MMF2021H	Numerical Methods for Finance
MMF2025H	Risk Management Laboratory
MMF2028H	Blockchain Fundamentals for Finance
MMF2030H	Machine Learning for Finance
MMF2032H	Innovation and Entrepreneurship

Course Code	Course Title
MMF2034H	Climate Risk Management in Finance

Additional Courses

Course Code	Course Title
MMF1915H	Introduction to Financial Products
MMF1926H	Workshop in Mathematical Finance

Mathematics

Mathematics: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Mathematics

MSc and PhD

Overview

The Department of Mathematics is a distinguished Faculty of more than 60 mathematicians, offering research opportunities in the areas of pure mathematics and applied mathematics. Faculty areas of research include, but are not limited to, real and complex analysis, ordinary and partial differential equations, harmonic analysis, nonlinear analysis, several complex variables, functional analysis, operator theory, C*-algebras, ergodic theory, group theory, analytic and algebraic number theory, Lie groups and Lie algebras, automorphic forms, commutative algebra, algebraic geometry, singularity theory, differential geometry, symplectic geometry, classical synthetic geometry, algebraic topology, set theory, set-theoretic topology, mathematical physics, fluid mechanics, probability, combinatorics, optimization, control theory, dynamical systems, computer algebra, cryptography, and mathematical finance.

Contact and Address

Web: www.mathematics.utoronto.ca
Email: gradinfo@math.toronto.edu
Telephone: (416) 978-7894
Fax: (416) 978-4107

Department of Mathematics
University of Toronto
Room 6290, 40 St. George Street
Toronto, Ontario M5S 2E4 Canada

Mathematics: Graduate Faculty

Full Members

Alexakis, Spyridon - BA, PhD
Aretakis, Stefanos - MA, PhD
Arthur, James - BSc, MSc, PhD
Bar-Natan, Dror - BSc, PhD
Bierstone, Edward - BSc, MA, PhD
Binder, Ilia - PhD
Bland, John - BSc, MSc, PhD
Braverman, Alexander - BSc, PhD
Bremer Jr, James - BSc, BSc, PhD
Burchard, Almut - MS, PhD
Collins, Tristan - PhD
De Simoi, Jacopo - PhD
Desjardins, Julie - BA, MA, PhD
Elliott, George - BSc, MSc, PhD
Friedlander, John - BSc, BS, MA, PhD
Graham, Ian - BSc, ScD
Gualtieri, Marco - BSc, DPhil
Haslhofer, Robert - BSc, MSc, PhD
Herzig, Florian - BA, PhD
Ingram, Patrick - PhD
Ivrii, Victor - MA, PhD, DSc
Jeffrey, Lisa - BA, MA, PhD
Jerrard, Robert - AB, PhD ***(Chair and Graduate Chair)***
Kamnitzer, Joel - BMath, PhD
Kapovitch, Vitali - BS, PhD
Karshon, Yael - PhD
Khanin, Konstantin - PhD
Khesin, Boris - MS, PhD
Khovanski, Askold - MS, DSc, PhD
Kim, Henry - BSc, PhD
Kopparty, Swastik - BS, MS, PhD
Kudla, Stephen - BA, MA, PhD
Litt, Daniel - PhD
Marcolli, Matilde - MS, PhD
McCann, Robert - BS, PhD
Meinrenken, Eckhard - PhD
Milman, Pierre - MA, PhD
Murphy, Emmy - BS, PhD
Murty, Vijayakumar - BSc, PhD
Nabutovsky, Alexander - MSc, PhD
Nachman, Adrian - BSc, MA, PhD
Panchenko, Dmitriy - MSc, PhD
Pugh, Mary - BA, MS, PhD
Quastel, Jeremy - BSc, MS, PhD
Rafi, Kasra - BSc, PhD
Repka, Joe - BSc, PhD
Rosenthal, Jeffrey - BSc, AM, PhD, FRSC
Rotman, Regina - BA, PhD
Rozenblyum, Nick - PhD
Saraf, Shubhangi - BS, MS, PhD
Scherk, John - BSc, MSc, DPhil
Seco, Luis - PhD
Serkh, Kirill - BS, MS, PhD
Shankar, Arul - BSc, PhD
Sigal, Israel Michael - BA, PhD
Stinchcombe, Adam - BMath, PhD
Sulem, Catherine - MMath, PhD
Tanny, Stephen - BSc, PhD
Tiozzo, Giulio - BA, MA, PhD
Todorcevic, Stevo - PhD
Tsimerman, Jacov - BSc, PhD
Uriarte-Tuero, Ignacio - BS, MSc, PhD ***(Associate Chair - Graduate)***
Virag, Balint - BA, MA, PhD
Weiss, William - BSc, MSc, PhD
Yampolsky, Michael - DPhil
Yu, Yun William - BA, MPH, MRes, PhD
Zhang, Ke - BS, PhD

Members Emeriti

Akcoglu, Mustafa - MSc, PhD
Andrews, David - BSc, MSc, PhD

Ellers, Erich - DrRerNat, DrRerNat
Halperin, J. Stephen - BSc, MSc, PhD, FRSC
Jurdjevic, Velimir - BS, MS, PhD
Kupka, Ivan - BSc, PhD, PhD
McCool, James - BSc, PhD
Murasugi, Kunio - BSc, DSc
Murnaghan, Fiona - BSc, MSc, PhD
Selick, Paul - BSc, MSc, PhD
Sen, Dipak - MSc, DSc
Sharpe, Richard - BSc, MA, PhD
Smith, Stuart - BSc, PhD
Tall, Franklin - AB, PhD

Associate Members

Dauvergne, Duncan - BSc, MSc, PhD
Landon, Benjamin Christopher - BSc, MSc, PhD
Liokumovich, Yevgeny - BSc, MSc, PhD
Olano Espinosa, Sebastian - PhD
Pan, Wenyu - PhD
Shlapentokh-Rothman, Yakov - BS, PhD
Spink, Hunter - PhD
Varma, Ila - BS, MSc, PhD

Mathematics: Mathematics MSc

The MSc is a research-oriented program. Opportunities for graduate study and research are available in most of the main areas of pure and applied mathematics. There is a large selection of graduate courses and seminars, a diverse student body of domestic and international students, and yet classes are small and the ratio of graduate students to faculty is low.

Many recent graduates are engaged in university teaching, and a significant number hold administrative positions in universities or in the professional communities. Others are pursuing careers in industry (technological or financial) or in government.

The MSc program is offered:

- for students with a complete undergraduate background in mathematics:
  - 12 months full-time
  - 24 months part-time
- for students who do not have a complete undergraduate background in mathematics. This option is not available on a part-time basis:
  - 16 months full-time
  - 24 months full-time

Provisional admission to the PhD program may be granted at the time of admission to the master's program.

MSc Program (12-Month Full-Time and 24-Month Part-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Mathematics' additional admission requirements stated below.
- Evidence of an excellent academic background and mathematical ability.

Completion Requirements

- Students must complete the program in one of two ways:
  - 3.0 approved full-course equivalents (FCEs) and a supervised research project (MAT4000Y), or its equivalent, **or**
  - 2.0 approved FCEs and an acceptable thesis. Two approved half-year courses are considered the equivalent of a full-year course.
- With approval, two prerequisite undergraduate half courses can be substituted for 0.5 graduate FCE.
- Students may, with approval, take courses outside the department as part of a coherent program.
- Students who undertake the MSc part-time must, at a minimum, satisfy the requirements of the 12-month program.
- Students who plan to continue to the PhD program may select 2.0 FCEs in core courses from the approved list in the PhD program requirements section. Students who obtain a grade of A– or higher in each of the corresponding core courses may count coursework towards the PhD comprehensive examination requirement in the particular subject areas.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MSc Program (16-Month Full-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Mathematics' additional admission requirements stated below.
- Evidence of an excellent academic background and mathematical ability.
- Students who do not have a complete undergraduate background in mathematics may be accepted into the 16-month program. This possibility may interest students who have some background in a subject in which mathematics is applied and/or who are interested in industrial applications of mathematics.

Completion Requirements

- Students must complete the program full-time in one of two ways:
  - 3.0 approved full-course equivalents (FCEs) and a supervised research project (MAT4000Y), or its equivalent, **or**

    - 2.0 approved FCEs and an acceptable thesis. Two approved half-year courses are considered the equivalent of a full-year course.
- Students must also complete an approved selection of prerequisites and other courses: an additional 2.0 FCEs in Year 2, 3, or 4 undergraduate courses in any of the following subjects: algebra, analysis, partial differential equations, probability, and topology.
- With approval, two prerequisite undergraduate half courses can be substituted for 0.5 graduate FCE.
- Students may, with approval, take courses outside the department as part of a coherent program.
- Students who plan to continue to the PhD program may select 2.0 FCEs in core courses from the approved list in the PhD program requirements section. Students who obtain a grade of A– or higher in each of the corresponding core courses may count coursework towards the PhD comprehensive examination requirement in the particular subject areas.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F)
Time Limit: 3 years full-time

MSc Program (24-Month Full-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Mathematics' additional admission requirements stated below.
- Evidence of an excellent academic background and mathematical ability.
- Students who do not have a complete undergraduate background in mathematics may be accepted into the 24-month program. This possibility may interest students who have some background in a subject in which mathematics is applied and/or who are interested in industrial applications of mathematics.

Completion Requirements

- Students must complete the program full-time as follows:
    - 3.0 approved full-course equivalents (FCEs) and a supervised research project (MAT4000Y), or its equivalent, **or**
    - 2.0 approved FCEs and an acceptable thesis. Two approved half-year courses are considered the equivalent of a full-year course.
- Students must also complete an approved selection of prerequisites and other courses: an additional 3.0 FCEs in Year 2, 3, or 4 undergraduate courses in any of the following subjects: algebra, analysis, partial differential equations, probability, and topology.
- With approval, two prerequisite undergraduate half courses can be substituted for 0.5 graduate FCE.
- Students may, with approval, take courses outside the department as part of a coherent program.
- Students who plan to continue to the PhD program may select 2.0 FCEs in core courses from the approved list in the PhD program requirements section. Students who obtain a grade of A– or higher in each of the corresponding core courses may count coursework towards the PhD comprehensive examination requirement in the particular subject areas.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Mathematics: Mathematics PhD

The PhD is a research-oriented program consisting of coursework, comprehensive examinations, and a thesis embodying the results of original research. Opportunities for graduate study and research are available in most of the main areas of pure and applied mathematics.

Applicants may enter the PhD program via one of two routes: 1) following completion of an appropriate MA or 2) direct entry following completion of a bachelor's degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Mathematics' additional admission requirements stated below.
- A master's degree from a recognized university. Students must satisfy the department of their ability to do independent research at an advanced level. They must show evidence of an excellent academic background and mathematical ability.

Completion Requirements

- **Coursework.** Students must successfully complete at least **3.0 full-course equivalents (FCEs)**. Out of the following 12 core courses, students must complete 6 courses:
    - MAT1000H *Real Analysis I*.
    - MAT1001H *Real Analysis II*.
    - MAT1002H *Complex Analysis*.
    - MAT1060H *Partial Differential Equations I*.
    - MAT1061H *Partial Differential Equations II*.
    - MAT1100H *Algebra I*.
    - MAT1101H *Algebra II*.
    - MAT1300H *Topology I*.
    - MAT1301H *Topology II*.
    - MAT1600H *Mathematical Probability I*.
    - MAT1601H *Mathematical Probability II*.
    - MAT1850H *Linear Algebra and Optimization*.

- **Comprehensive examination.**
  - Students must pass a comprehensive examination in basic mathematics before beginning an area of research. This examination is scheduled at the start of the Fall session (usually September) and should be taken no later than the start of the third session.
  - Students have the option to write the final exam of any core course to obtain core credit. This requires approval of the Graduate Office.
  - Students who obtain a grade of A– or higher in each of the corresponding core courses for the general areas of mathematics will be exempted from the comprehensive examination requirement in the specific area of study.
- Students must pass a **qualifying oral examination** or give a seminar presentation in their particular area of study before embarking on serious thesis research.
- The main requirement of the degree is an acceptable **thesis** embodying original research of a standard that warrants publication in the research literature.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Mathematics' additional admission requirements stated below.
- Exceptionally strong BSc students with a grade point average (GPA) of 3.7 or higher may apply for direct admission to the PhD program. Students must satisfy the department of their ability to do independent research at an advanced level. They must show evidence of an excellent academic background and mathematical ability.

Completion Requirements

- **Coursework.** Students must complete at least **4.0 full-course equivalents (FCEs)**.
  - Out of the following 12 core courses, students must complete 6 courses (3.0 FCEs):
    - MAT1000H *Real Analysis I*.
    - MAT1001H *Real Analysis II*.
    - MAT1002H *Complex Analysis*.
    - MAT1060H *Partial Differential Equations I*.
    - MAT1061H *Partial Differential Equations II*.
    - MAT1100H *Algebra I*.
    - MAT1101H *Algebra II*.
    - MAT1300H *Topology I*.
    - MAT1301H *Topology II*.
    - MAT1600H *Mathematical Probability I*.
    - MAT1601H *Mathematical Probability II*.
    - MAT1850H *Linear Algebra and Optimization*.
  - Students must also complete 1.0 elective FCE.
- Students must complete MAT4000Y *Supervised Research Project* or its equivalent.

- **Comprehensive examination.**
  - Students must pass a comprehensive examination in basic mathematics before beginning an area of research. This examination is scheduled at the start of the Fall session (usually September) and should be taken no later than the start of the third session.
  - Students have the option to write the final exam of any core course to obtain core credit. This requires approval of the Graduate Office.
  - Students who obtain a grade of A– or higher in each of the corresponding core courses for the general areas of mathematics will be exempted from the comprehensive examination requirement in the specific area of study.
- Students must pass a **qualifying oral examination** or give a seminar presentation in their particular area of study before embarking on serious thesis research.
- The main requirement of the degree is an acceptable **thesis** embodying original research of a standard that warrants publication in the research literature.

Mode of Delivery: In person

Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Mathematics: Mathematics MSc, PhD Courses

Each year the department offers a selection of courses chosen from the following list, with the possibility of further additions. The courses MAT1000H, 1001H, 1100H, 1101H, 1300H, 1301H, 1600H, and 1601H will be offered each year; the complete list of courses is available from the department. In addition, it may be possible for a student to arrange to take one of the listed courses as an individual reading course. Students should consult the office of the coordinator at the beginning of the academic year.

PhD students are expected to attend and contribute to seminars in the research areas.

Course Code	Course Title
MAT1000H	Real Analysis I
MAT1001H	Real Analysis II
MAT1002H	Complex Analysis
MAT1004H	Theory of Approximation
MAT1005H	Fourier Analysis
MAT1006H	Topics in Real Analysis
MAT1007H	Topics in Complex Variables
MAT1008H	Functions of a Complex Variable
MAT1010H	Functional Analysis
MAT1011H	Introduction to Linear Operators
MAT1012H	Real Analysis II

Course Code	Course Title
MAT1013H	Theory of Several Complex Variables II
MAT1015H	Topics in Operator Theory
MAT1016Y	Topics in Operator Algebras
MAT1017H	Introduction to K-theory for Operator Algebras
MAT1034H	Topics in Harmonic Analysis
MAT1037H	Von Neumann Algebras
MAT1045H	Topics in Ergodic Theory
MAT1051H	Introduction to Ordinary Differential Equations
MAT1060H	Partial Differential Equations I
MAT1061H	Partial Differential Equations II
MAT1062H	Topics in Partial Differential Equations I
MAT1064H	Elliptic Boundary Value Problems on Nonsmooth Domains
MAT1100H	Algebra I
MAT1101H	Algebra II
MAT1103H	Topics in Algebra I
MAT1104H	Topics in Algebra II
MAT1105H	Topics in Representation Theory
MAT1109H	Classical Groups
MAT1110H	Algebraic Groups
MAT1120H	Lie Groups and Lie Algebras I
MAT1126H	Lie Groups and Fluid Dynamics
MAT1128H	Topics in Probability
MAT1155H	Commutative Algebra
MAT1190H	Algebraic Geometry
MAT1191H	Topics in Algebraic Geometry
MAT1192H	Advanced Topics in Algebraic Geometry
MAT1194H	Algebraic Curves
MAT1196H	Representation Theory
MAT1197H	Automorphic Forms and Representation Theory I
MAT1198H	Automorphic Forms and Representation Theory II
MAT1199H	Automorphic Forms
MAT1200H	Algebraic Number Theory
MAT1202H	Analytic Number Theory
MAT1203H	Computational Aspects of Number Theory
MAT1210H	Topics in Number Theory

Course Code	Course Title
MAT1300H	Differential Topology
MAT1301H	Algebraic Topology
MAT1302H	Combinatorial Methods
MAT1303H	Combinatorial Designs
MAT1304H	Topics in Combinatorics
MAT1305H	Topics in Geometric Topology
MAT1306H	The Discrete Mathematics Toolkit
MAT1309H	Geometrical Inequalities
MAT1312H	Topics in Geometry
MAT1313Y	Seminar in Geometry
MAT1314H	Introduction to Noncommutative Geometry
MAT1318H	Seminar in Geometry and Topology
MAT1340H	Differential Topology
MAT1341H	Topics in Differential Geometry
MAT1342H	Introduction to Differential Geometry
MAT1343H	Riemannian Manifolds
MAT1344H	Symplectic Geometry
MAT1346H	Homotopy Theory
MAT1347H	Topics in Symplectic Geometry and Topology
MAT1351H	Topics in Homotopy Theory
MAT1355H	Singularity Theory
MAT1359H	Moduli Spaces of Flat Connections
MAT1360H	Complex Manifolds
MAT1392H	Algebra Seminar
MAT1399H	Advanced Point Set Topology
MAT1403H	Model Theory
MAT1404H	Introduction to Model Theory and Set Theory
MAT1430H	Set Theory
MAT1435H	Topics in Set Theory
MAT1449H	Seminar in Foundations
MAT1497H	Professional Development
MAT1498H	Communicating Mathematics to a General Audience
MAT1499H	Teaching Large Mathematics Courses

Applied Mathematics

Course Code	Course Title
MAT1500H	Topics in Graph Theory
MAT1500Y	Applied Analysis
MAT1502H	Topics in Geometric Analysis
MAT1507H	Asymptotic and Perturbation Methods
MAT1508H	Techniques of Applied Mathematics
MAT1509H	Mathematical and Computational Linguistics
MAT1520H	Wave Propagation
MAT1525H	Topics in Inverse Problems and Image Analysis
MAT1525Y	Inverse Problems of X-Ray and Radar Imaging
MAT1600H	Mathematical Probability I
MAT1601H	Mathematical Probability II
MAT1639Y	Topics in Fluid Mechanics
MAT1700H	General Relativity
MAT1710H	Group Theory and Quantum Mechanics
MAT1722H	C* Algebras and Quantum Mechanics
MAT1723H	Foundations of Quantum Mechanics
MAT1724H	Functional Analysis in Quantum Mechanics
MAT1725Y	Scattering Theory
MAT1739H	Topics in Mathematical Physics
MAT1750H	Computational Mathematics
MAT1751H	Quantum Computing, Foundations to Frontier
MAT1760H	Computer Algebra
MAT1761H	Algorithms in Algebraic Geometry
MAT1800H	Methods of Applied Mathematics I
MAT1801H	Methods of Applied Mathematics II
MAT1839H	Integral Equation Methods for the Numerical Solution of PDEs
MAT1840H	Control Theory
MAT1841H	Mathematics of Massive Data Analysis: Fundamentals and Applications
MAT1844H	Nonlinear Dynamical Systems
MAT1845H	Dynamical Systems
MAT1847H	Holomorphic Dynamics
MAT1850H	Linear Algebra and Optimization
MAT1855H	Mathematical Problems in Economics
MAT1856H	Mathematical Finance
MAT1880H	Case Studies in Applied Mathematics

Individual Reading Courses

Course Code	Course Title
MAT1900Y	Readings in Pure Mathematics
MAT1901H	Readings in Pure Mathematics
MAT1902H	Readings in Pure Mathematics
MAT1950Y	Readings in Applied Mathematics
MAT1951H	Readings in Applied Mathematics

Seminars

Course Code	Course Title
MAT3001H	Seminar in Pure Mathematics
MAT3002H	Seminar in Applied Mathematics

Research Project

Course Code	Course Title
MAT4000Y	Supervised Research Project

Mechanical and Industrial Engineering

MIE: Introduction

Faculty Affiliation

Applied Science and Engineering

Degree Programs

Mechanical and Industrial Engineering

MASc

- Emphases:
  - Sustainable Energy

MEng

- Emphases:
  - Advanced Manufacturing;
  - Advanced Soft Materials;
  - Biomanufacturing;
  - Data Analytics and Machine Learning;
  - Engineering and Globalization;
  - Entrepreneurship, Leadership, Innovation and Technology in Engineering (ELITE);
  - Forensic Engineering;
  - Robotics;
  - Sustainable Energy;
  - Waterpower

PhD

- Emphases:
  - Sustainable Energy

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Biomedical Engineering** (admissions have been administratively suspended)
  - Mechanical and Industrial Engineering, MASc, PhD
- **Engineering Education**
  - Mechanical and Industrial Engineering, MASc, PhD
- **Knowledge Media Design**
  - Mechanical and Industrial Engineering, MASc, MEng, PhD
- **Neuromodulation**
  - Mechanical and Industrial Engineering, MASc, PhD
- **Psychology, Psychiatry and Engineering**
  - Mechanical and Industrial Engineering, MASc, PhD
- **Resuscitation Sciences** (admissions have been administratively suspended)
  - Mechanical and Industrial Engineering, MASc, MEng, PhD
- **Robotics**
  - Mechanical and Industrial Engineering, MASc, PhD

Overview

The Department of Mechanical and Industrial Engineering accepts qualified applicants for study in a wide range of topics, spanning the breadth of mechanical and industrial engineering, including advanced manufacturing and materials engineering; applied mechanics and design; biomedical engineering; energy and environmental engineering; robotics, mechatronics and instrumentation; thermal and fluid sciences engineering; human factors/ergonomics; information engineering; and operations research.

Contact and Address

Web: www.mie.utoronto.ca/contact-us/
Email: gradoffice@mie.utoronto.ca
Telephone: (416) 978-2805

Department of Mechanical and Industrial Engineering
University of Toronto
Mechanical Engineering Building, 5 King's College Road
Toronto, Ontario M5S 3G8 Canada

MIE: Graduate Faculty

Full Members

Aleman, Dionne - BSc, MSc, PhD
Alfred, Myrtede - PhD
Amon, Cristina - BASc, MSc, ScD
Ashgriz, Nasser - BS, ME, DPhil
Azhari, Fae - BEng, PhD
Bazylak, Aimy - PhD
Beck, Chris - BSc, MSc, PhD
Behdinan, Kamran - BASc, BEng, MASc, MASc, PhD, PhD
Ben Mrad, Ridha - BSc, PhD
Bender, Timothy - PhD
Benhabib, Bensiyon - BSc, MSc, PhD
Bilton, Amy Marlou - BASc, MS, PhD
Bussmann, Markus - BASc, MASc, PhD ***(Chair and Graduate Chair)***
Carter, Michael - BM, MMath, PhD
Chan, Timothy - BSc, PhD
Chandra, Sanjeev - PhD
Chignell, Mark - BSc, PhD
Cohen, Eldan - BSc, PhD

Consens, Mariano - BEng, MSc, PhD
Diller, Eric David - BS, MS, PhD
Dolatabadi, Ali - BS, MASc, PhD
Donmez Akyildiz, Birsen - BS, MS, PhD
Duduta, Mihai - PhD
Filleter, Tobin - BE, PhD, PhD ***(Coordinator of Graduate Studies)***
Fox, Mark - BSc, PhD
Golovin, Kevin Bram - PhD
Gruninger, Michael - BSc, MS, PhD
Guenther, Axel - DipIng, DE
Jamieson, Greg - BS, MASc, PhD ***(Acting Chair and Acting Graduate Chair)***
Kesler, Olivera - BSE, SM, ScD
Khalil, Elias - BCS, MCS, PhD
Kwon, Roy - BA, MS, MSc, PhD
Lee, Chi-Guhn - DPhil
Lee, Patrick Chang Dong - MSc, PhD
Liu, Xinyu - PhD
Mandelis, Andreas - BSc, MA, MSc, PhD
McCahan, Susan - BS, PhD
Meguid, Shaker - BSc, MSc, PhD
Montague, Enid Nicole Headen - PhD
Mostaghimi, Javad - PhD
Naguib, Hani - BSc, ME, PhD, PEng
Nejat, Goldie - BASc, PhD
Olechowski, Alison - BS, MS, MS, PhD, PhD
Park, Chul - PhD
Sain, Mohini - PhD
Sanner, Scott - BCS, BCS, PhD
Shu, L.H. - PhD
Simmons, Craig - BSc, MSc, PhD
Sinclair, Anthony - BSc, MSc, PhD
Sinton, David - BASc, MEng, PhD
Steinman, David - BASc, MASc, PhD
Sullivan, Pierre - BS, MS, PhD
Sun, Yu - BS, MS, MS, PhD
Thomson, Murray - BSc, PhD
Windisch, Marianne Touchie - BASc, PhD
Young, Edmond - BASc, MASc, PhD

Members Emeriti

Goldenberg, Andrei - BSc, MSc, PhD
James, David - BSc, MA, MS, PhD
Jardine, Andrew - BSc, MSc, PhD
Milgram, Paul - BASc, MSc, PhD
Paradi, Joseph - BSc, PhD
Posner, Morton - BASc, PhD
Rogers, John - BSc, MS, PhD
Venter, Ronald - BSc, MEng, PhD
Wallace, James - BA, BME, MEng, PhD

Associate Members

Bazylak, Jason - BE
Carrick, Roger - BE, ME, ME
Colic, Sinisa - BASc, MASc, PhD
Drake, James McKenzie - BSE, MBChB, MSc
Farkas, Kornel - PhD
Frances, Daniel - BASc, MASc, PhD, PEng
Goodfellow, Sebastian - MASc, PhD
Guerzhoy, Michael - BASc, BSc, MCS, MSc, MSc, MSc
Hatton, Benjamin - BASc, MASc, PhD
Jazinizadeh, Fatemeh - PhD
Khalvati, Farzad - MASc, PhD
Khosroshahi, Seyed - BSc, MSc, PhD
Lawryshyn, Yuri - DipIng, BASc, MASc, MBA, PhD
Marzi, Elham - BA, BIS, MIR, PhD
Matsuura, Naomi - ME, PhD
Mihailidis, Alex - BASc, MASc, PhD
Moore, Emily - BASc, DPhil
Purdie, Thomas - BSc, PhD
Romkey, Lisa - BSc
Rottmann, Cindy - BSc, BE, AM, DPhil
Sarhangian, Vahid - BASc, MASc, PhD
Sheridan, Patricia - MASc, PhD
Singh, Chandra Veer - BASc, MTech, PhD
Stanescu, Teodor - PhD
Tihanyi, Deborah - BA, MA
You, Lidan - BS, MS, PhD
Zhou, Shurui - PhD

MIE: Mechanical and Industrial Engineering MASc

The MASc degree program provides students with an opportunity to pursue research-intensive advanced studies in a particular field of interest.

Master of Applied Science

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Mechanical and Industrial Engineering's additional admission requirement stated below.
- Evidence of research ability.

Completion Requirements

- At the beginning of each student's program, a professor in the department will be identified as the supervisor who will guide the student in the research program and selection of courses.
- For students with an adequate undergraduate background, the program will normally consist of 2.0 full-course equivalents (FCEs) and a thesis.
- MASc students are required to participate in the non-credit seminar course JDE1000H during their first or second session of registration.
- In Year 1, MASc students are required to attend at least 70% of seminars that are part of the MIE Seminar Series. Students who complete the requirement will receive credit for SRM3333Y *MIE Seminar Series for MASc Students*.
- Students in the MASc program have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Mechanical and Industrial Engineering MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

MIE: Mechanical and Industrial Engineering MEng

The **Master of Engineering (MEng)** degree program is designed for students preparing for advanced professional activity; it is not a research-oriented degree. The program may be taken on a full-time, extended full-time, or part-time basis.

MEng Program (Full-Time and Part-Time Options)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Mechanical and Industrial Engineering's additional admission requirements stated below.
- A mid-B in the final two years of undergraduate study.

Completion Requirements

- Students must successfully complete a total of **5.0 full-course equivalents (FCEs) or 3.5 FCEs plus a supervised project**. A majority of the courses must be either offered by the Department of MIE or from a list (found on the department's website) of approved courses deemed equivalent to an MIE course.
- Program completion is possible in three sessions (one year).
- Part-time students are limited to four half courses per year and two half courses per session. Time to completion will be greater than two years.
- Students in the MEng program have the option of completing an emphasis in Advanced Manufacturing; Biomanufacturing; Data Analytics and Machine Learning; Engineering and Globalization; Entrepreneurship, Leadership, Innovation and Technology in Engineering (ELITE); Forensic Engineering; Robotics; or Sustainable Energy as part of their degree program. Please see details in the Mechanical and Industrial Engineering Emphases section.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 9 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MEng Program (Extended Full-Time Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Mechanical and Industrial Engineering's additional admission requirement stated below.
- A mid-B in the final two years of undergraduate study.

Completion Requirements

- Students must successfully complete a total of **5.0 full-course equivalents (FCEs) or 3.5 FCEs plus a supervised project.** A majority of the courses must be either offered by the Department of MIE or from a list (found on the department's website) of approved courses deemed equivalent to an MIE course.
- Students are expected to complete the requirements in six sessions (two years). They are limited to seven half courses per year and three half courses per session.
- Students in the MEng program have the option of completing an emphasis in Advanced Manufacturing; Biomanufacturing; Data Analytics and Machine Learning; Engineering and Globalization; Entrepreneurship, Leadership, Innovation and Technology in Engineering (ELITE); Forensic Engineering; Robotics; or Sustainable Energy as part of their degree program. Please see details in the Mechanical and Industrial Engineering Emphases section.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

MIE: Mechanical and Industrial Engineering PhD

The **Doctor of Philosophy (PhD) degree program** is for students anticipating a career in which they will be performing or directing research at the most advanced level.

Students may be admitted to the PhD program via one of three routes: 1) following completion of an appropriate master's degree; 2) transfer from the University of Toronto MASc program; or 3) direct entry following completion of a bachelor's degree.

The Department of Mechanical and Industrial Engineering offers both full-time and flexible-time PhD program options. Applicants must declare the option for which they wish to apply; transfers between these programs are not permitted.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Mechanical and Industrial Engineering's additional admission requirements stated below.
- Admission to the PhD program is reserved for those who are able to present evidence of superior academic and research ability. Students may be admitted to the PhD program with an appropriate University of Toronto master's degree or its equivalent from a recognized university with a minimum B+ average.

Completion Requirements

- At the beginning of each student's program, a professor in the department will be identified as the supervisor and will guide the student in the research program and selection of courses.
- Minimum departmental standards in coursework: completion of **2.5 full-course equivalents (FCEs) plus a thesis**.
- Participation in the non-credit seminar course JDE1000H during the first or second session of registration.
- In Years 1 and 2, students must attend at least 70% of seminars that are part of the MIE Seminar Series. Students who complete this requirement will receive credit for SRD4444Y *MIE Seminar Series*.
- Students must pass a qualifying examination, annual progress meetings, and the SGS Doctoral Final Oral Examination.
- Students must present a research seminar during the final year of their studies.
- Students must be on campus full-time unless special permission is obtained for off-campus study.
- Students have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Mechanical and Industrial Engineering MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- Admission to the PhD program is reserved for those who are able to present evidence of superior academic and research ability. Very strong MASc students may apply to transfer to the PhD program after completing only one year of the MASc program.

Completion Requirements

- At the beginning of each student's program, a professor in the department will be identified as the supervisor and will guide the student in the research program and selection of courses.
- Minimum departmental standards in coursework: completion of **3.5 full-course equivalents (FCEs) plus a thesis**.
- Participation in the non-credit seminar course JDE1000H during the first or second session of registration.
- In Years 1 and 2, students must attend at least 70% of seminars that are part of the MIE Seminar Series. Students who complete this requirement will receive credit for SRD4444Y *MIE Seminar Series*.
- Students must pass a qualifying examination, annual progress meetings, and the SGS Doctoral Final Oral Examination.
- Students must present a research seminar during the final year of their studies.
- Students must be on campus full-time unless special permission is obtained for off-campus study.
- Students in the PhD program have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Mechanical and Industrial Engineering MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Mechanical and Industrial Engineering's additional admission requirements stated below.
- Admission to a PhD program is reserved for those who are able to present evidence of superior academic and research ability. Students may be admitted to the PhD program with an appropriate University of Toronto master's degree or its equivalent from a recognized university with a minimum B+ average.

Completion Requirements

- At the beginning of each student's program, a professor in the department will be identified as the supervisor and will guide the student in the research program and selection of courses.
- Minimum departmental standards in coursework: completion of **3.5 full-course equivalents (FCEs) plus a thesis**.
- Participation in the non-credit seminar course JDE1000H during the first or second session of registration.

- In Years 1 and 2, students must attend at least 70% of seminars that are part of the MIE Seminar Series. Students who complete this requirement will receive credit for SRD4444Y *MIE Seminar Series*.
- Students must pass a qualifying examination, annual progress meetings, and the SGS Doctoral Final Oral Examination.
- Students must present a research seminar during the final year of their studies.
- Students must be on campus full-time unless special permission is obtained for off-campus study.
- Students in the PhD program have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Mechanical and Industrial Engineering MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Flexible-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Mechanical and Industrial Engineering's additional admission requirements stated below.
- Admission to a PhD program is reserved for those who are able to present evidence of superior academic and research ability. Students may be admitted to the PhD program with an appropriate University of Toronto master's degree or its equivalent from a recognized university with a minimum B+ average.
- Applicants to the flexible-time PhD option are accepted under the same admission requirements as applicants to the full-time PhD option. However, in addition, applicants to the flexible-time PhD option must demonstrate that they are actively engaged in professional activities related to their proposed program of study.

Completion Requirements

- At the beginning of each student's program, a professor in the department will be identified as the supervisor and will guide the student in the research program and selection of courses.
- Minimum departmental standards in coursework: completion of **2.5 full-course equivalents (FCEs) and a thesis**.
- Participation in the non-credit seminar course JDE1000H during their first or second session of registration.
- In Years 1 and 2, students must attend at least 70% of seminars that are part of the MIE Seminar Series. Students who complete this requirement will receive credit for SRD4444Y *MIE Seminar Series*. Students whose professional background is such that they would be deemed to have fulfilled this breadth requirement may be exempted upon consultation with the admissions committee.
- Students must pass a qualifying examination, annual progress meetings, and the SGS Doctoral Final Oral Examination.
- Students must present a research seminar during the final year of their studies.
- Students in the PhD program have the option of completing an emphasis in Sustainable Energy as part of their degree program. Please see details in the Mechanical and Industrial Engineering MASc, MEng, PhD Emphases section.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

MIE: Mechanical and Industrial Engineering: Emphases

Advanced Manufacturing

Participating Programs:

- Aerospace Science and Engineering MEng
- Chemical Engineering and Applied Chemistry MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete:

- **Four half courses (2.0 full-course equivalents [FCEs])**, including at least one core course.
- Elective courses may include other core courses, and courses from either of two streams: Manufacturing Engineering and Manufacturing Management.

Core Courses

AER501H1 *Computational Structural Mechanics and Design Optimization*,
AER1403H *Advanced Aerospace Structures*,
APS1028H *Operations and Production Management for Manufacturing and Services*,
CHE1123H *Liquid Biofuels*,
MIE519H1 *Advanced Manufacturing Technologies*,
MIE1740H *Smart Materials and Structures*.

Elective Courses — Manufacturing Engineering

AER1415H,
CHE1134H, CHE1475H,
MIE506H1, MIE540H1, MIE1706H, MIE1709H, MIE1718H, MIE1743H,
MSE1013H, MSE1015H, MSE1028H, MSE1031H, MSE1043H, MSE1058H, MSE1061H,
ROB501H1, ROB521H1.

Elective Courses — Manufacturing Management

APS1012H, APS1013H, APS1017H, APS1020H, APS1023H, APS1088H, APS1420H,
CHE561H1, CHE1434H,
MIE523H1, MIE1022H, MIE1505H, MIE1514H, MIE1715H, MIE1721H, MIE1727H,
TEP1011H, TEP1026H, TEP1501H.

Advanced Soft Materials

Participating Programs:

- Chemical Engineering and Applied Chemistry MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete any **four half courses (2.0 full-course equivalents [FCEs])** from the following list:
CHE562H1, CHE1310H, CHE1333H, CHE1335H, CHE1475H, JTC1134H, JTC1135H,
MIE1705H, MIE1706H, MIE1707H, MIE1740H,
MSE1043H.

Students may double-count one course at most towards any CHE emphasis, or towards any other emphasis in the Faculty.

Biomanufacturing

Participating Programs:

- Chemical Engineering and Applied Chemistry MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete any **four half courses (2.0 full-course equivalents [FCEs])** from the following list:
CHE1123H, CHE1125H, CHE1134H, CHE1135H, CHE1334H, CHE1450H, CHE1471H,
JCC1313H,
JTC1331H,
BME1459H, BME1480H.

Students may double-count one course at most towards any CHE emphasis, or towards any other emphasis in the Faculty.

Data Analytics and Machine Learning

Participating Programs:

- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Electrical and Computer Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

To be admitted to the emphasis in Data Analytics and Machine Learning, MEng students must first successfully complete a **prerequisite course APS1070H (0.5 full-course equivalent [FCE])**.

Subsequently, to earn the emphasis, students must successfully complete **four additional half courses (2.0 FCEs)** from the list of core courses or elective courses. These must include at least one core course; the remaining courses must be selected from the list of elective courses.

Students must have completed the prerequisite course APS1070H before taking any of the core courses.

Prerequisite Course

APS1070H *Foundations of Data Analytics and Machine Learning*.

Core Courses

CHE1147H *Data Mining in Engineering*,
ECE1513H *Introduction to Machine Learning*,
MIE1624H *Introduction to Data Science and Analytics*,
MIE1626H *Data Science Methods and Statistical Learning*,
MSE1065H *Application of Artificial Intelligence in Materials Design*.

Elective Courses

APS502H1, APS1005H, APS1017H, APS1022H, APS1050H, APS1051H, APS1052H, APS1053H, APS1080H,
BME1570H,
CEM1002H,
CHE507H1, CHE1108H, CHE1148H, CHE1434H,
CIV1504H, CIV1506H, CIV1507H, CIV1532H, CIV1538H, CIV1599H,
ECE537H1, ECE1504H, ECE1505H, ECE1657H, ECE1779H, ECE1786H,
MIE562H1, MIE1077H, MIE1413H, MIE1501H, MIE1512H, MIE1513H, MIE1517H, MIE1520H, MIE1620H, MIE1621H, MIE1622H, MIE1623H, MIE1625H, MIE1628H, MIE1653H, MIE1666H, MIE1721H, MIE1727H, MIE1769H,
MSE1063H.

Engineering and Globalization

Participating Programs:

- Aerospace Science and Engineering MEng
- Biomedical Engineering MEng
- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Electrical and Computer Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete **four half courses (2.0 full-course equivalents [FCEs])** from the following lists, with at least two half courses (or one full course) taken from Group A.

Group A

APS510H1, APS530H1, APS1420H, JCR1000Y (full-year course).

Group B

APS1015H, APS1020H, APS1024H, CHL5700H, CIV1399H.
Note: Students who choose to pursue an MEng project in their home department that aligns with the Centre for Global Engineering (CGEN)'s disciplinary focus, as deemed by the CGEN Director, may count the project as one required Group B course.

Students who complete the requirements of the emphasis in Engineering and Globalization and wish to obtain a notation on their transcript should contact the Faculty Graduate Studies office.

Entrepreneurship, Leadership, Innovation and Technology in Engineering

Participating Programs:

- Aerospace Science and Engineering MEng
- Biomedical Engineering MEng
- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Electrical and Computer Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete **any four of the following courses (2.0 full-course equivalents [FCEs])**:

Leadership

TEP1010H, TEP1011H, TEP1026H, TEP1027H, TEP1029H, TEP1030H, TEP1501H, TEP1502H, TEP1601H.

Entrepreneurship and Innovation

APS511H1, APS1012H, APS1013H, APS1015H, APS1023H, APS1033H, APS1035H, APS1036H, APS1041H, APS1061H, APS1088H.

Finance and Management

AER1601H, APS500H1, APS502H1, APS1001H, APS1004H, APS1009H, APS1016H, APS1017H, APS1020H, APS1022H, APS1028H, APS1032H, APS1043H, APS1049H, APS1050H, APS1051H, APS1052H.

Engineering and Society

APS510H1, APS1018H, APS1024H, APS1025H, APS1031H, APS1034H, APS1090H, APS1101H, APS1420H.

Forensic Engineering

Participating Programs:

- Biomedical Engineering MEng
- Chemical Engineering and Applied Chemistry MEng
- Civil Engineering MEng
- Mechanical and Industrial Engineering MEng
- Materials Science and Engineering MEng

MEng students must successfully complete **four courses (one core course and three elective courses; 2.0 full-course equivalents [FCEs])**.

Core Course

MSE1031H *Forensic Engineering*.

Elective Courses

AER1604H,
APS1034H, APS1039H, APS1040H, APS1101H,
BME1480H, BME1800H, BME1801H, BME1802H,
CHE561H1, CHE568H1, CHE1213H, CHE1431H, CHE1432H, CHE1434H, CHE1436H,
CIV510H1, CIV518H1, CIV1163H, CIV1171H, CIV1174H, CIV1190H, CIV1201H, CIV1279H, CIV1282H, CIV1422H, CIV1429H,
JMB1050H,
JNC2503H,
MIE507H1, MIE533H1, MIE566H1, MIE1301H, MIE1303H, MIE1411H, MIE1414H, MIE1514H, MIE1616H, MIE1708H, MIE1714H, MIE1721H, MIE1727H, MIE1804H,
MSE1015H, MSE1016H, MSE1022H, MSE1032H, MSE1067H.

Robotics

Participating Programs:

- Aerospace Science and Engineering MEng
- Electrical and Computer Engineering MEng
- Mechanical and Industrial Engineering MEng

Students must successfully complete **four courses (2.0 full-course equivalents [FCEs])** chosen from at least two of the following groups, and no more than two in any given group:

Group 1: Planning and Control

AER1516H, AER1517H,
ECE557H1, ECE1635H, ECE1636H, ECE1647H, ECE1653H, ECE1657H,
MIE1064H.

Group 2: Perception and Learning

AER1513H, AER1515H,
CSC2503H, CSC2506H, CSC2515H, CSC2541H, CSC2548H,

ECE516H1, ECE1511H, ECE1512H,
JEB1433H, ROB501H1.

Group 3: Modelling and Dynamics

AER506H1, AER1503H, AER1512H,
JEB1444H,
MIE1001H, MIE1005H.

Group 4: Systems Design and Integration

AER525H1, AER1216H, AER1217H,
CSC2621H,
ECE470H1,
MIE505H1, MIE506H1, MIE1070H, MIE1075H, MIE1076H,
MIE1080H, MIE1809H,
ROB521H1, ROB1514H.

Sustainable Energy

Participating Programs:

- Aerospace Science and Engineering MASc
- Aerospace Science and Engineering MEng
- Aerospace Science and Engineering PhD
- Chemical Engineering and Applied Chemistry MASc
- Chemical Engineering and Applied Chemistry MEng
- Chemical Engineering and Applied Chemistry PhD
- Civil Engineering MASc
- Civil Engineering MEng
- Civil Engineering PhD
- Electrical and Computer Engineering MASc
- Electrical and Computer Engineering MEng
- Electrical and Computer Engineering PhD
- Mechanical and Industrial Engineering MASc
- Mechanical and Industrial Engineering MEng
- Mechanical and Industrial Engineering PhD
- Materials Science and Engineering MASc
- Materials Science and Engineering MEng
- Materials Science and Engineering PhD

MASc and PhD students must successfully complete:

- At least **three half courses (1.5 full-course equivalents [FCEs])** from either of the following lists below.
- A thesis towards their degree on a topic related to sustainable energy. Topics must be approved by the steering committee of the Institute of Sustainable Energy. Contact: emphasis@cpe.utoronto.ca.

MEng students must successfully complete:

- **Four half courses (2.0 FCEs)** from either of the following lists below, including at least one core course (0.5 FCE).

Core Courses

APS1032H *Introduction to Energy Project Management*,
MIE515H1 *Alternative Energy Systems*,
MIE1120H *Current Energy Infrastructure and Resources*.

Elective Courses

AER507H1, AER1304H, AER1315H, AER1415H,
CHE568H1, CHE1053H, CHE1118H, CHE1123H, CHE1142H,
CHE1143H,
CIV575H1, CIV576H1, CIV577H1, CIV1303H, CIV1307H,
ECE1030H, ECE1055H, ECE1057H, ECE1059H, ECE1085H,
ECE1086H, ECE1092H, ECE1094H, ECE1476H,
MIE516H1, MIE517H1, MIE1128H, MIE1129H, MIE1130H,
MIE1132H, MIE1240H, MIE1241H, MIE1715H,
MSE1023H, MSE1028H, MSE1058H.

Contact

All students are asked to register with Climate Positive Energy (CPE) at emphasis@cpe.utoronto.ca, at the beginning of their studies, to receive information about energy-related activities and opportunities on campus. CPE also administers a number of awards and scholarships for which students may be eligible.

Waterpower

Participating Programs:

- Civil Engineering MEng
- Mechanical and Industrial Engineering MEng

MEng students must successfully complete **four half courses (2.0 full-course equivalents [FCEs]**, including one core course. The remaining coursework may be taken from the following lists.

Core Course

APS1410H *Waterpower Essentials*.

Group A (complete at least one)

APS1411H,
CIV550H1.

Group B (complete at least one)

AER1410H,
APS1024H, APS1032H,
CIV514H1, CIV523H1, CIV580H1, CIV1001H, CIV1163H,
CIV1171H, CIV1252H, CIV1275H, CIV1279H, CIV1281H,
CIV1303H, CIV1399H, CIV1420H,
ECE520H1, ECE1049H, ECE1059H, ECE1093H, ECE1094H,
ENV1001H, ENV1701H, ENV1703H,
MIE1201H, MIE1207H, MIE1210H, MIE1222H, MIE1241H.

MIE: Mechanical and Industrial Engineering MASc, MEng, PhD Courses

See the departmental website for a schedule of available courses.

Fluid Mechanics

Course Code	Course Title
MIE520H1	Biotransport Phenomena
MIE1201H	Advanced Fluid Mechanics I
MIE1206H	Non Newtonian Fluid Mechanics
MIE1207H	Structure of Turbulent Flows
MIE1208H	Microfluidic Biosensors (prerequisite: undergraduate-level fluidic mechanics)
MIE1210H	Computational Fluid Mechanics and Heat Transfer
MIE1212H	Convective Heat Transfer
MIE1214H	Applied Computational Fluid Dynamics (CFD)
MIE1222H	Multiphase Flows
MIE1232H	Microfluidics and Laboratory-on-a-Chip Systems
MIE1240H	Wind Power
MIE1241H	Energy Management
MIE1242H	Applied Thermal Management: Applications in Electric Vehicles, Electronic Systems, and Datacenters
MIE1299H	Special Topics in Fluid Mechanics

Human Factors and Ergonomics

Course Code	Course Title
MIE542H1	Human Factors Integration
MIE1401H	Human Factors Engineering
MIE1402H	Experimental Methods in Human Factors Research
MIE1403H	Analytical Methods in Human Factors Research
MIE1411H	Design of Work Places
MIE1412H	Human-Automation Interaction
MIE1413H	Statistical Models in Empirical Research
MIE1414H	Human Factors in Transportation
MIE1415H	Analysis and Design of Cognitive Work
MIE1416H	Human Factors in Healthcare
MIE1444H	Engineering for Psychologists and Psychiatrists
MIE1499H	Special Topics in Human Factors and Ergonomics

Information Engineering

Course Code	Course Title
MIE1501H	Knowledge Modelling and Management
MIE1505H	Enterprise Modelling
MIE1510H	Formal Techniques in Ontology Engineering
MIE1512H	Data Analytics
MIE1513H	Decision Support Systems
MIE1514H	Systems Design and Engineering: A Product Perspective
MIE1516H	Structured Learning and Inference
MIE1517H	Introduction to Deep Learning
MIE1520H	Learning with Graphs and Sequences

Mechanics and Materials

Course Code	Course Title
MIE517H1	Fuel Cell Systems
MIE540H1	Product Design
MIE1128H	Materials for Clean Energy Technologies
MIE1301H	Solid Mechanics
MIE1303H	Fracture Mechanics
MIE1359H	Engineering Cell Biology and Micro-Nanoengineered Platforms
MIE1705H	Thermoplastics Polymer Processing
MIE1706H	Manufacturing of Cellular and Microcellular Polymers
MIE1707H	Structure-Property Relationships of Thermoplastic and Composite Foams
MIE1708H	Collision Reconstruction
MIE1709H	Continuum Mechanics
MIE1710H	Sustainable Development (Manufacturing) of Circular Materials for Healthy Climate
MIE1715H	Life Cycle Engineering
MIE1720H	Creativity in Conceptual Design
MIE1724H	Additive Manufacturing in Engineering Applications
MIE1725H	Soft Robotics
MIE1740H	Smart Materials and Structures
MIE1744H	Nanomechanics of Materials
MIE1745H	Surface Engineering

Course Code	Course Title
MIE1804H	The Finite Element Method in Mechanical Engineering
MIE1807H	Principles of Measurements

Mechatronics and Dynamics

Course Code	Course Title
MIE506H1	MEMS Design and Microfabrication
MIE1001H	Advanced Dynamics
MIE1005H	Theory of Vibrations
MIE1010H	Acoustics and Noise Control
MIE1050H	Design of Intelligent Sensor Networks
MIE1052H	Signal Processing for Bioengineering
MIE1064H	Control Analysis Methods with Applications to Robotics
MIE1070H	Intelligent Robots for Society
MIE1075H	AI Applications in Robotics
MIE1076H	AI Applications in Robotics II
MIE1077H	AI Applications in Robotics III
MIE1080H	Introduction to Healthcare Robotics
MIE1718H	Computer Integrated Manufacturing
MIE1809H	Advanced Mechatronics

Operations Research

Course Code	Course Title
MIE561H1	Healthcare Systems
MIE562H1	Scheduling
MIE566H1	Decision Making Under Uncertainty
MIE1603H	Integer Programming
MIE1605H	Stochastic Processes
MIE1607H	Stochastic Modelling and Optimization
MIE1612H	Stochastic Programming and Robust Optimization
MIE1613H	Stochastic Simulation
MIE1615H	Markov Decision Processes
MIE1616H	Research Topics in Healthcare Engineering
MIE1619H	Constraint Programming and Hybrid Algorithms
MIE1620H	Linear Programming and Network Flows
MIE1621H	Non-Linear Optimization
MIE1622H	Computational Finance and Risk Management
MIE1623H	Introduction to Healthcare Engineering
MIE1624H	Introduction to Data Science and Analytics
MIE1625H	Machine Learning for Medical Image Analysis
MIE1626H	Data Science Methods and Statistical Learning
MIE1628H	Big Data Science
MIE1653H	Integer Programming Applications
MIE1666H	Machine Learning for Mathematical Optimization
MIE1699H	Special Topics in Operations Research
MIE1714H	Failure Analysis
MIE1721H	Reliability and Asset Management
MIE1727H	Quality Assurance I

Thermal Sciences

Course Code	Course Title
MIE515H1	Alternative Energy Systems
MIE516H1	Combustion and Fuels
MIE1101H	Advanced Classical Thermodynamics
MIE1107H	Statistical Thermodynamics
MIE1115H	Heat Transfer with Phase Change
MIE1120H	Current Energy Infrastructure and Resources
MIE1122H	Combustion Engine Processes
MIE1123H	Fundamentals of Combustion
MIE1129H	Nuclear Engineering I: Reactor Physics and the Nuclear Fuel Cycle
MIE1130H	Nuclear Engineering II: Thermal and Mechanical Design of Nuclear Power Reactors
MIE1132H	Heat Exchanger Design
MIE1133H	Laser Applications in Engineering
MIE1135H	Thermal Phenomena, Performance, and Management of Electric Vehicles
MIE1199H	Special Topics in Thermal Sciences
MIE1801H	Advanced Engineering Analysis

APS Engineering Courses

Course Code	Course Title
APS1005H	Operations Research for Engineering Management
APS1012H	Managing Business Innovation and Transformational Change
APS1013H	Applying Innovation in Engineering and Business Operations
APS1015H	Social Entrepreneurship
APS1016H	Financial Management for Engineers
APS1017H	Supply Chain Management and Logistics
APS1018H	The Engineer in Society — Ethics, History and Philosophy
APS1022H	Financial Engineering 2
APS1023H	New Product Innovation
APS1028H	Operations and Production Management for Manufacturing and Services
APS1032H	Introduction to Energy Project Management
APS1034H	Making Sense of Accidents
APS1043H	Writing Your Own Patent Application
APS1049H	Management Consulting for Engineers
APS1050H	Blockchain Technologies and Cryptocurrencies
APS1051H	Portfolio Management Praxis Under Real Market Constraint
APS1052H	Artificial Intelligence in Finance: From Neural Networks to Deep Learning
APS1053H	Case Studies in AI in Finance
APS1061H	Business Strategy and Intrapreneurship
APS1070H	Foundations of Data Analytics and Machine Learning
APS1101H	System Dynamic Risk Assessment
APS1803Y	Multidisciplinary MEng Project
APS2000Y	Engineering Practicum
TEP1203H	Teaching Engineering in Higher Education
TEP1204H	Instructional Design in Engineering Education

SCFI MEng Courses

Course Code	Course Title
MIE1750H	Innovation Management I
MIE1751H	Innovation Management II
MIE1752H	Innovation Finance and Economics
MIE1753H	Legal Framework for Innovation
MIE1754H	Laser Applications in Manufacturing
MIE1755H	CAE Technologies in Automotive Engineering
MIE1757H	Electric Motor Technologies in Automotive Engineering
MIE1758H	Polymers and Composites in Automotive Design and Manufacturing
MIE1759H	Polymers and Composites Processing in Automotive
MIE1760H	Metals in Automotive Design and Manufacturing
MIE1761H	Metal Forming Simulation
MIE1763H	Hot Stamping 1. — Metallurgy, Materials, Thermomechanical Treatment, and Welding
MIE1764H	Hot Stamping 2. — Process and Product Performance Simulation and Optimization
MIE1765H	Aluminum Die Casting 1. — Metallurgy, Process Design, and Optimization
MIE1766H	Aluminum Die Casting 2. — Product Design and Optimization
MIE1767H	Mechatronics in Automotive Applications 1
MIE1768H	Mechatronics in Automotive Applications 2
MIE1769H	Artificial Intelligence in Automotive and Manufacturing Applications
MIE1770H	Artificial Intelligence in Automotive and Manufacturing Applications 2
MIE1771H	Additive Manufacturing in Automotive and High-Volume Applications

Reading Courses

Course Code	Course Title
MIE2002H	Readings in Industrial Engineering I
MIE2003H	Readings in Industrial Engineering II
MIE2004H	Readings in Mechanical Engineering I
MIE2005H	Readings in Mechanical Engineering II

Seminar Courses

Course Code	Course Title
SRM3333Y	MIE Seminar Series for MASc Students

Course Code	Course Title
SRD4444Y	MIE Seminar Series for PhD Students

Project

Course Code	Course Title
MIE8888Y	MEng Research Project

Medical Biophysics

Medical Biophysics: Introduction

Faculty Affiliation

Medicine

Degree Programs

Medical Biophysics

MSc and PhD

Combined Degree Programs

MD / PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Biomedical Engineering** (admissions have been administratively suspended)
  - Medical Biophysics, MSc, PhD
- **Cardiovascular Sciences**
  - Medical Biophysics, MSc, PhD
- **Genome Biology and Bioinformatics**
  - Medical Biophysics, PhD
- **Neuroscience**
  - Medical Biophysics, MSc, PhD

Overview

The Department of Medical Biophysics is an interdisciplinary graduate department dedicated to fundamental and translational research in biomedicine, with a particular focus on cancer. Research is carried out in the extensive facilities provided in the Princess Margaret Cancer Centre, Sunnybrook Research Institute, and the Hospital for Sick Kids Research Institute, as well as at other hospital locations.

The department accepts students in the biological and life sciences as well as in physics, engineering, and the mathematical sciences. It offers opportunities for research addressing fundamental problems in medical science: projects which cut across the conventional boundaries of biology, physics, engineering, chemistry, and medicine are encouraged. The department focuses on basic and applied research related to cancer, but also addresses neuroscience and cardiovascular medicine. Medical Biophysics research themes include biomedical imaging, cancer diagnosis and therapy, cancer mechanisms and models, cardiovascular sciences, data science and computational biology, image-guided therapy and device development, neuroscience, stem cells and regenerative medicine, and structural biology. For detailed information, please visit the departmental website.

Contact and Address

Web: medbio.utoronto.ca
Email: medbio.info@utoronto.ca
Telephone: (416) 634-8751 or (416) 634-8755

Department of Medical Biophysics
MaRS Centre, Princess Margaret Cancer Research Tower
101 College Street, Suite 15-701
Toronto, Ontario M5G 1L7 Canada

Medical Biophysics: Graduate Faculty

Full Members

Ailles, Laurie - PhD ***(Chair and Graduate Chair)***
Akens, Margarete - DVM, PhD
Andrews, David - PhD
Arrowsmith, Cheryl - BSc, PhD
Attisano, Liliana - BSc, PhD
Bjerknes, Matthew - BSc, MSc, PhD
Bratman, Scott - MD, PhD
Burns, Peter - BSc, PhD
Chan, Steven - MD, PhD
Chen, Jean - PhD
Chiew, Mark - PhD
Cunningham, Charles - BSc, MSc, PhD ***(Uptown Vice-Chair)***
Czarnota, Gregory - MD, PhD
DaCosta, Ralph - PhD
Danska, Jayne - AB, PhD
De Carvalho, Daniel - PhD
Demore, Christine - PhD
Diamandis, Phedias - BS, MD, PhD
Edwards, Aled - BSc, PhD
Filmus, Jorge - MSc, PhD
Foster, Stuart - BSc, MSc, PhD
Fraser, Paul - BSc, MSc, PhD
Gallie, Brenda - MD
Gariepy, Jean - BSc, PhD
Goertz, David - MSc, PhD
Goubran, Maged - PhD
Graham, Simon - BSc, PhD
Haibe-Kains, Benjamin - PhD
Hakem, Razq - PhD
Harding, Shane - PhD
He, Housheng - PhD
Hoffman, Michael - PhD
Hope, Kristin - PhD
Huang, Annie - MD
Hynynen, Kullervo - BSc, MS, PhD
Ikura, Mitsuhiko - BSc, PhD
Irwin, Meredith - MD
Iscove, Norman - MD, PhD
Jaffray, David - BSc, PhD
Jones, Courtney - PhD
Jurisica, Igor - PhD, CRC
Keller, Gordon - PhD
Kerbel, Robert - BSc, PhD

Khokha, Rama - BSc, MSc, PhD
Kirsch, David - BSc, MD, PhD
Kislinger, Thomas - PhD
Koritzinsky, Marianne
Lau, Angus - PhD
Leong, Hon - MSc, PhD
Lerch, Jason - BA, PhD
Lilge, Lothar - DipPhy, PhD ***(Downtown Graduate Coordinator)***
Lin, Fa-Hsuan - PhD
Liu, Fei-Fei - MD
Liu, Geoffrey - BSc, MSc, MD
Liu, Stanley - MD, PhD
Lok, Benjamin - BSc, MD
Lupien, Mathieu - PhD
Macgowan, Christopher - BSc, MSc, PhD
MacIntosh, Bradley - PhD
Mak, Tak - BSc, MSc, PhD
Malkin, David - MD ***(Associate Chair)***
Marsden, Philip - MD
Martel, Anne - BSc, PhD
Mazhab-Jafari, Mohammad - MSc, PhD
Mcglade-Dolson, Jane - BSc, PhD
McIntosh, Chris - PhD
Moody, Alan - BA, MA, MBBS
Near, Jamie - BSE, PhD
Nieman, Brian - PhD
Notta, Faiyaz - MS, PhD
O'Brien, Catherine - BSc, MSc, DrMed, PhD
O'Reilly, Meaghan - MS, PhD ***(Uptown Graduate Coordinator)***
Paige, Christopher - BSc, PhD
Penn, Linda - BSc, PhD
Prive, Gil - BSc, PhD
Pugh, Trevor - PhD
Purdie, Thomas - BSc, PhD
Ramaswamy, Vijay - MD
Raught, Brian - BS, MS, PhD
Reedijk, Michael - BSc, MSc, MD, PhD
Rink, Alexandra - BSc, PhD
Ross, Bernhard - DipIng, PhD
Rottapel, Robert - BA, MD
Rubinstein, John - BSc, PhD, PhD
Santyr, Giles - PhD
Schimmer, Aaron - MD, PhD
Seuntjens, Jan - PhD
Sled, John - BASc, MEng, PhD ***(Downtown Vice-Chair)***
Spaner, David - PhD
Stambolic, Vuk - BSc, MSc, PhD
Stanisz, Greg - PhD ***(Uptown Graduate Coordinator)***
Stefanovic, Bojana - BASc, PhD
Strother, Stephen - BSc, MS, PhD
Tabori, Uri - MBBS
Taylor, Michael - BSc, DrMed, PhD
Tiedemann, Rodger - MBChB, PhD
Tikhonova, Anastasia - PhD
Trudel, Suzanne - MSc, MD
Tsao, Ming-Sound - BSc, MD
Uludag, Kamil - PhD
Vitkin, Alex - BASc, MASc, PhD
Weersink, Robert - BSc, PhD
Wilson, Brian - BSc, PhD
Wong, Chong Shun - MD
Woodgett, James - BSc, PhD
Wright, Graham - BSc, MSc, PhD
Yaffe, Martin - BSc, MSc, PhD
Zacksenhaus, Eldad - PhD
Zarrine-Afsar, Arash - BSc, PhD
Zheng, Gang - MSc, PhD

Members Emeriti

Boyd, Norman - MD
Chakrabartty, Avijit - BSc, MSc, PhD
Hedley, David - MD
Henkelman, Mark - BSc, MSc, PhD
Julius, Michael - BSc, PhD
Minden, Mark - MD, PhD
Ottensmeyer, Peter - BASc, MA, PhD
Pai, Emil - PhD
Plewes, Donald - BSc, MSc, PhD
Rauth, A. Michael - BSc, PhD

Associate Members

Bissonnette, Jean-Pierre - PhD
Chao, Tzu Cheng - PhD
Coolens, Catherine - BS, MB, PhD
Courtot, Melanie - PhD
Gaiti, Federico - MSc, PhD
Gaiti, Federico - MSc, PhD
Hysi, Eno - MSc, PhD
Kumar, Sushant - BTech, PhD
Michael, Iacovos - MSc, PhD
Nguyen, Long - MD
Qian, Chenxi - PhD
Rose, David - BA
Schwartz, Gregory - MSc, PhD

Medical Biophysics: Medical Biophysics MSc

The objective of the MSc program is for students to acquire written and oral scholarly research skills in Medical Biophysics. Students carry out a research project (which is usually laboratory-based), prepare a research thesis, take graduate-level courses, and attend and participate in research seminars. Students select from a flexible, modular curriculum and participate in department-wide Medical Biophysics Graduate Student Seminars which develop skills in cross-disciplinary communication.

All MSc students carry out a thesis project in a laboratory that they select by means of a rotations program on entry to the department. Through this project they acquire knowledge in the design of experiments and in the interpretation and critical analysis of research findings. Students submit a thesis that reports critically on their research and pass an oral examination. They are guided by a supervisory committee through which they have access to the wide range of expertise in our faculty.

Students participate in student symposium, invited lecture series, and research seminars throughout their program. They are encouraged to reclassify (transfer) into the PhD program through an examination during Year 2, taken about 20 months after entry.

Master of Science

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Medical Biophysics' additional admission requirements stated below.
- Applicants from diverse academic backgrounds are encouraged to apply.

Completion Requirements

- **Coursework.** Students must complete a total of **2.5 full-course equivalents (FCEs)** as follows:
  - MBP1015Y *Biophysics Seminar* (1.0 FCE). Note that students must attend this continuous course until their degree program is completed.
  - MBP1200H *Scientific Exposition and Ethics* (0.25 FCE).
  - MBP1201H *Biostatistics* (0.25 FCE).
  - One of the following two options:
    - a biology-stream module (0.25 FCE) or
    - a graduate course (0.25 FCE) chosen in consultation with the department that provides a foundation in biology.
  - The balance of 0.75 FCE is chosen from any of the other course modules; or (with departmental approval) graduate courses in another department.
  - Modules are taken within courses. See the course list below.
- Successful completion of an **oral examination** of the student's research thesis.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Medical Biophysics: Medical Biophysics PhD

The objective of the PhD program is to prepare students for a career in biomedical research. It is designed to provide both a broad knowledge of biomedical science and advanced training in basic research at a subspecialty level. Thesis work may address fundamental and/or translational problems in the biology, diagnosis, and therapy of cancer, as well as areas of neuroscience and cardiovascular medicine. By the end of the program, graduates will have acquired the ability to conduct independent theoretical and/or experimental research which makes an original contribution to the field, prepare publications, and give public presentations of their work at national and international venues.

These objectives are met through a combination of coursework, teaching, and research seminars, mentored laboratory research, and preparation of manuscripts for publication. Graduates may attain professorial positions in academic research and teaching institutions, hospital laboratories, and in the medical device, pharmaceutical, and biomedical science and information industries, including startup companies which they have founded.

Applicants may enter the PhD program via one of three routes: 1) following completion of an MSc degree into the four-year full-time program; 2) transfer from the University of Toronto MSc program; or 3) direct entry following completion of a BSc degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Medical Biophysics' additional admission requirements stated below.
- Applicants may be admitted following completion of an MSc degree program in biological, physical, chemical, or medical sciences from a recognized Canadian university or equivalent.
- Admission to the PhD program is highly selective and attainment of minimum admission requirements does not guarantee acceptance.

Completion Requirements

- All students, regardless of entry option, complete the same program requirements.
- Considering the broad range of topics available for thesis research and the different backgrounds of students admitted, each student, in consultation with their supervisor, will plan a program of study that provides the appropriate background for the area of investigation.
- All PhD students will participate in MBP1015Y *Biophysics Seminar* regardless of whether or not they have previously received credit for it.
- Students who transfer/reclassify into the doctoral program will receive credit for all courses taken during their MSc program in Medical Biophysics.
- Except by special arrangement, students are required to attend the research institute or campus laboratory and participate full-time until all program requirements are completed.
- **Coursework.** Students must complete a total of **3.5 full-course equivalents (FCEs)** as follows:
  - MBP1015Y *Biophysics Seminar*. Note that this is a continuous course which students must attend until their degree is completed.
  - MBP1200H *Scientific Exposition and Ethics*.
  - MBP1201H *Biostatistics*.
  - One of the following two options:
    - a biology-stream module (0.25 FCE) or
    - a graduate course (0.25 FCE) chosen in consultation with the department that provides a foundation in biology.
  - The balance of 1.75 FCE is chosen from any of the other course modules; or (with departmental approval) graduate courses in another department.

- Students must complete all required coursework by the end of Year 3 in order to achieve candidacy. Upon achieving candidacy, completion is noted on the student's transcript.
- Students must take a **PhD Qualifying Examination** in Year 2.
- Successful completion of a **Doctoral Final Oral Examination** of the student's research thesis.

Mode of Delivery: In person
Program Length: 4 years full-time
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- Applicants may be accepted into the PhD program via transfer from the University of Toronto Medical Biophysics MSc program with an A– average and by successfully defending a research proposal during a reclassification oral examination within 20 months in the program.

Completion Requirements

- All PhD students will participate in MBP1015Y *Biophysics Seminar* regardless of whether or not they have previously received credit for it.
- Students who transfer/reclassify into the doctoral program will receive credit for all courses taken during their MSc program in Medical Biophysics. See the course requirements above for the PhD program. Students must have an A– average in these courses.
- Students will defend a research thesis at the **Doctoral Final Oral Examination** conducted by Medical Biophysics and the School of Graduate Studies.
- Except by special arrangement, students must attend the research institute or campus laboratory and participate full-time until all program requirements are completed.
- **Coursework.** Students must complete a total of **3.5 full-course equivalents (FCEs)** as follows:
  - MBP1015Y *Biophysics Seminar*. Note that this is a continuous course which students must attend until their degree is completed.
  - MBP1200H *Scientific Exposition and Ethics*.
  - MBP1201H *Biostatistics*.
  - One of the following two options:
    - a biology-stream module (0.25 FCE) or
    - a graduate course (0.25 FCE) chosen in consultation with the department that provides a foundation in biology.
  - The balance of 1.75 FCE is chosen from any of the other course modules; or (with departmental approval) graduate courses in another department.
  - Students must complete all required coursework by the end of Year 4 in order to achieve candidacy. Upon achieving candidacy, completion is noted on the student's transcript.
- Successful completion of a **Doctoral Final Oral Examination** of the student's research thesis.

Mode of Delivery: In person
Program Length: 5 years full-time
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Transfer Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Medical Biophysics' additional admission requirements stated below.
- Outstanding students may be admitted directly to the PhD program following completion of a BSc degree with an A– average in biological, physical, chemical, or medical sciences from a recognized Canadian university or equivalent.
- Applicants holding bachelor's degrees from non-Canadian universities must provide Graduate Record Examination scores (General and Subject) with their application.
- Admission to the PhD program is highly selective and attainment of minimum admission requirements does not guarantee acceptance.

Completion Requirements

- Students must successfully defend a research proposal during a qualifying oral examination within 18 months of entry into the program.
- Students will defend a research thesis at the **Doctoral Final Oral Examination** conducted by the Department of Medical Biophysics and the School of Graduate Studies.
- Except by special arrangement, students must attend the research institute or campus laboratory and participate full-time until all program requirements are completed.
- **Coursework.** Students must complete a total of **3.5 full-course equivalents (FCEs)** as follows:
  - MBP1015Y *Biophysics Seminar*. Note that this is a continuous course which students must attend until their degree is completed.
  - MBP1200H *Scientific Exposition and Ethics*.
  - MBP1201H *Biostatistics*.
  - One of the following two options:
    - a biology-stream module (0.25 FCE) or
    - a graduate course (0.25 FCE) chosen in consultation with the department that provides a foundation in biology.
  - The balance of 1.75 FCE is chosen from any of the other course modules; or (with departmental approval) graduate courses in another department.
  - Students must complete all required coursework by the end of Year 4 in order to achieve candidacy. Upon achieving candidacy, completion is noted on the student's transcript.
- Students must take a **PhD Qualifying Examination** in Year 2.
- Successful completion of a **Doctoral Final Oral Examination** of the student's research thesis.

Mode of Delivery: In person
Program Length: 5 years full-time
Time Limit: 7 years full-time

Medical Biophysics: Medical Biophysics MSc, PhD Courses

Each September the department publishes a list of specific modules available to students during the following two academic years. Please consult with the department.

Course Code	Course Title
MBP1015Y	Biophysics Seminar
MBP1017H	Electron Cryomicroscopy for Protein Structure Determination
MBP1200H	Scientific Exposition and Ethics
MBP1201H	Biostatistics
MBP1300H	Quantitative Cancer Genomics
MBP1301H	Radiation Oncology: Clinical and Experimental Radiobiology
MBP1302H	Structural Biology and Proteomics
MBP1303H	Cell Signaling and Metabolism
MBP1304H	Predictive Oncology and Therapeutics
MBP1305H	Experimental Models for Cancer Research
MBP1306H	Cancer Epigenetics
MBP1307H	Development, Stem Cells, and Cancer
MBP1308H	Radiation Biology and DNA Repair
MBP1309H	Clinical Imaging for Physical Scientists
MBP1310H	Cancer Immunotherapy
MBP1311H	Tumour Microenvironment
MBP1400H	Advanced Magnetic Resonance Imaging
MBP1401H	Advanced Ultrasound
MBP1402H	Biological Imaging
MBP1403H	Biophysics of Focused Ultrasound, Thermal Biophysics
MBP1404H	Basics of Cell and Molecular Biology
MBP1405H	Introduction to Bio-Microscopies
MBP1406H	Introduction to Biophotonics
MBP1407H	Magnetic Resonance Imaging — Overview
MBP1408H	Medical Device Commercialization Essentials
MBP1409H	Medical Device Innovation and Entrepreneurship
MBP1410H	Nanotechnology for Medicine
MBP1411H	Overview of Medical Imaging
MBP1412H	Ultrasound — Overview
MBP1413H	Biomedical Applications of AI
MBP1414H	Reading Special Topics
MBP1415H	Radiotherapy Physics
MBP1416H	Anatomy and Physiology (for Non-Specialists or Physicists)
MBP1417H	Introduction to Health Physics

Medical Science

Medical Science: Introduction

Faculty Affiliation

Medicine

Degree Programs

Biomedical Communications

MScBMC

- Fields:
  - Biomedical Media Design;
  - Biomedical Visualization Design

Medical Science

MSc and PhD

- Fields:
  - Bioethics;
  - Biomedical Science;
  - Clinical Science;
  - Health Professions Education;
  - Population Health/Health Services;
  - Radiation Oncology

Combined Degree Programs

MD / PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Addiction Studies**
  - Medical Science, MSc, PhD
- **Aging, Palliative and Supportive Care Across the Life Course**
  - Medical Science, MSc, PhD
- **Bioethics** (admissions have been administratively suspended)
  - Medical Science, MSc, PhD
- **Biomedical Engineering** (admissions have been administratively suspended)
  - Medical Science, MSc, PhD
- **Cardiovascular Sciences**
  - Medical Science, MSc, PhD
- **Developmental Biology**
  - Medical Science, MSc, PhD
- **Environment and Health**
  - Medical Science, MSc, PhD
- **Genome Biology and Bioinformatics**
  - Medical Science, PhD
- **Global Health (U of T Global Scholar)**
  - Medical Science, PhD
- **Health Services and Policy Research**
  - Medical Science, MSc, PhD
- **Knowledge Media Design**
  - Medical Science, MSc, PhD
- **Musculoskeletal Sciences**
  - Medical Science, MSc, PhD
- **Neuromodulation**
  - Medical Science, MSc, PhD
- **Neuroscience**
  - Medical Science, MSc, PhD
- **Psychology, Psychiatry and Engineering**
  - Medical Science, MSc, PhD
- **Toxicology**
  - Medical Science, MSc, PhD
- **Women's Health**
  - Medical Science, MSc, PhD

Diploma Programs

Graduate Diploma in Health Research

GDipHR

Overview

With over 600 faculty and 550 students, the Institute of Medical Science (IMS) was established to foster education and scholarship in the Clinical Departments of the Faculty of Medicine. IMS specializes in translational research with a strong emphasis on bench-to-bedside clinical applications. Degree candidates have the opportunity to conduct research in one of four training areas: bio-medical science; clinical science; health systems and services; and population health. Graduates have been appointed to positions as academics and health-care professionals in universities, government, and industry.

Contact and Address

Medical Science Program

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Toronto, Ontario M5S 1A8 Canada

Biomedical Communications Program

Web: bmc.med.utoronto.ca
Email: bmc.info@utoronto.ca
Telephone: (905) 569-4849

Master of Science in Biomedical Communications
University of Toronto Mississauga
HSC 308, 3359 Mississauga Road
Mississauga, Ontario L5L 1C6 Canada

Graduate Diploma in Health Research

Web: md.utoronto.ca/graduate-diploma-health-research-gdiphr
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Medical Science: Graduate Faculty

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Agur, Anne - BSc, MSc, PhD
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Al-Omran, Mohammed - MSc, MD, MBBS
Alain, Claude - BA, MA, PhD
Alibhai, Shabbir - MD
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Ameis, Stephanie - BA, MD, MSc
Andrade, Danielle - MD, MSc
Aspuru-Guzik, Alan - PhD
Astell, Arlene - BSc, PhD
Bagby, Michael - BA, MA, PhD, PhD
Baker, Andrew - MD, MD
Baker, Andrew - MHSc, MD
Barr, Cathy - BSc, PhD
Barron, David - MD
Barua, Moumita - DrMed
Bassett, Anne - BSc, MD
Batt, Jane - MD, PhD
Battaglia, Marco - BA, DrMed
Baxter, Nancy - DrMed, PhD
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Bendayan, Reina - BScPhm
Bhat, Mamatha - MD, Mmed
Black, Sandra - BSc, MD
Blumberger, Daniel - BA, BA, MSc
Boggild, Andrea - BSc, MD, MSc
Boileau, Isabelle - PhD
Boulos, Mark - BSc, MD
Brill, Julie - PhD
Brochard, Laurent - MD
Brown, Theodore - BSc, PhD
Brydges, Ryan - BSc, MSc, PhD
Castle, David - MD, MBChB, MSc
Cattral, Mark - BScMed, MD, MSc
Cescon, David - BSc, MD
Chandran, Vinod - MBBS, PhD
Chapman, Kenneth - MD, MSc
Chauhan, Vijay - MD
Cheema, Asim - MBBS
Chen, Robert - MB
Cherney, David - MD, PhD
Cheyne, Douglas - BSc, MA, PhD
Chow, Chung-Wai - MD, PhD
Chung, Frances - MBBS
Clarke, Hance - MD, MSc
Coburn, Bryan - BSc, DrMed
Cohen, Eyal - MSc, MD
Coles, John Gordon - MD
Connelly, Kim - MBBS, PhD
Croitoru, Ken - MDCM
Cusimano, Michael - MD, MHPE, PhD
Cypel, Marcelo - DrMed
Das, Sunit - DrMed
Dawson, Laura - MD
De Luca, Vincenzo - MD, PhD
Diaconescu, Andreea - PhD
Dimaras, Helen - BSc, PhD
Dlamini, Nomazulu - MBBS
dos Santos, Claudia - MD, MSc
Downar, Jonathan - MD
Dror, Yigal - MD
Drucker, Daniel - MD
Eder, Lihi - DrMed
Esplen, Mary Jane - BScN, MSN, PhD, PhD, RN
Eubanks, James - AA, BSc, PhD
Faiz, Maryam - PhD
Fan, Eddy - BSc, MD, PhD
Fasano, Alfonso - MD, PhD
Fehlings, Michael - MD, PhD, LMCC
Feinstein, Anthony - MBChB, PhD
Feldman, Brian - MD
Feusner, Jamie - BS, MD
Fish, Joel Steven - BSc, MSc, MD
Fleshner, Neil - MD, MPH, LRCP
Flint, Alastair - ChB
Floras, John - MD, DPhil
Forrest, Christopher Robert - BSc, MD, MSc
Foussias, George - BSc, MSc, DrMed, PhD
Fremes, Stephen - BA, MD, MSc
Furlan, Andrea - MD, PhD
Gagliardi, Anna - BSc, BE, MLS, MSc, PhD
Gaisano, Herbert - BS, MD
Galea, Liisa - BSc, AM
Gallinger, Steven - MD, MSc
George, Tony - BSc, MD
Gerretsen, Philip - MD, MSW, PhD
Ginsburg, Shiphra - MD, MEd
Gladdy, Rebecca - DrMed, PhD
Gladman, Dafna - MD
Goldenberg, Neil - BSc, MD, PhD
Graff-Guerrero, Ariel - MD
Grantcharov, Teodor - DrMed, PhD
Granton, John - BS, MD
Griffiths, John - BSc, MSc, PhD
Grunebaum, Eyal - MD
Guerguerian, Anne Marie - MD
Gupta, Neeru - BM
Hahn, Margaret - DrMed, PhD
Haider, Masoom - BM, MD
Hamani, Clement - DrMed, PhD
Hamilton, Jill - BSc, MD, MSc
Hamilton, Robert - BSc, MD, PhD
Haroon, Nigil - MD, MBBS, PhD

Harrison, Robert - PhD, DSc
Hawco, Colin - BSc, MSc, PhD
Haykal, Siba - BS, MD, PhD
Heon, Elise - MD, LMCC
Herrmann, Nathan - MD
Hill, Sean - BA, PhD
Hodaie, Mojgan - BSc, MD, MSc
Hodges, Brian - BA, MD, Med
Honjo, Osami - DrMed, PhD
Horner, Richard - BSc, PhD
Howard, Andrew William - BA, MD, MSc, CPSO, LMCC
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Humar, Atul - MSc, MD
Hung, Rayjean - MSc, DrMedVet, PhD
Husain, Mansoor - MB, MD
Ibrahim, George - BS, MD, PhD
Irwin, Meredith - MD
Janssen, Harry - MD, PhD
Jarvi, Keith - MD
Jenkinson, Jodie - BA, MSc, PhD
Jeschke, Marc - DrMed, PhD
Jin, Yaping - PhD
Jones, Jennifer - BA, PhD
Josselyn, Sheena - MA, PhD
Juvet, Stephen - DrMed, PhD
Kaplan, Allan - AA, BA, MD, MSc
Kaplan, David - BA, PhD
Kapus, Andras - MD, PhD
Kassner, Andrea - MSc, PhD
Katz, Joel - MA, PhD
Kaul, Rupert - MD, PhD
Keating, Armand - BSc, MD
Kennedy, James - MD
Kennedy, Sidney - BAO, MBChB, DPsych
Keshavjee, Shaf - BA, MD, MSc, LMCC
Khalvati, Farzad - MASc, PhD
Kiang, Michael - MD, PhD
Kingdom, John - DipCH, MD, MB
Kloiber, Stefan - DrMed
Kolla, Nathan - BA, MD, MA, PhD
Kontos, Pia - BA, MA, PhD
Konvalinka, Ana - DrMed
Koritzinsky, Marianne
Krzyzanowska, Monika - MD, MPH
Kucharczyk, Walter - MD
Kutryk, Michael - MD
Kwong, Jeff - BSc, MD, MSc
Lai, Meng-Chuan - MD, PhD
Le Foll, Bernard - MSc, DrMed, PhD
Lee, Douglas - DrMed, PhD
Lee, Jacques - MD, MSc
Lee, Warren - MD, PhD
Lemaire, Mathieu - MD, PhD
Leong-Poi, Howard - MD
Levinson, Wendy - BSc, MD
Levitan, Robert - MDCM, MSc
Li, Madeline - MD
Li, Ren-Ke - MD, MHSc, MSc, PhD
Librach, Clifford - MD
Licht, Christoph - MD
Lim, Andrew - BSc, MD
Lin, Fa-Hsuan - PhD
Lin, Steve - MSc, MD
Lindsay, Thomas - BSc, MDCM, MSc
Lipsman, Nir - BS, MD, PhD
Liu, Fang - PhD
Liu, Fei-Fei - MD
Liu, Geoffrey - BSc, MD, MSc
Liu, Mingyao - MD, MSc ***(Director)***
Lok, Benjamin - BSc, MD
Mahmud, Farid - MD
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Malkin, David - MD
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Martinu, Tereza - MD
Masellis, Mario - MD, MSc
Maunder, Robert - MD
Mazer, Cyril David - MD
McCart, Andrea - MD, MSc
McCrindle, Brian - MD
McDonald, Lynn - PhD
McIntosh, Anthony Randal - BSc, MSc, PhD
McIntyre, Roger - MD
Mertens, Luc - MD
Mikulis, David - BS, MD
Miller, Freda - BSc, PhD
Milosevic, Michael - MD
Mishra, Sharmistha - BSc, MD
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Moe, Gordon - MD
Mohammadzadeh, Gelareh - BSc, BScMed, DrMed, DPhil
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Morshead, Cindi - BS, PhD
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Mueller, Daniel - MD
Muise, Aleixo - MD
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Naglie, Gary - BSc, MDCM
Nanthakumar, Kumaraswamy - MD
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Nauth, Aaron - BSc, MSc, MD
Nolan, Robert - PhD
Orser, Beverley - MD, PhD
Osborne, Lucy - PhD
Parekh, Rulan - MD
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Pei, York - MD
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Reid, Aylin - MD
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Richards, Robin - BA, MD
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Rosenblum, Norman - MD
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Wright, Graham - BSc, MSc, PhD
Yang, Burton - BSc, MSc, PhD
Yang, Victor - BASc, MD, MASc, PhD
Yasufuku, Kazuhiro - DrMed, PhD
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Yeh, Ann - MD
Yeung, Rae - DrMed, MD
Yucel, Yeni - MD
Yuen, Darren - BSc, MD, PhD
Zhang, Liang - PhD
Zimmermann, Camilla - MSc, MD

Members Emeriti

Bombardier, Claire - MA, MD
Brown, Gregory - BCh, MD, DrMed
Fisher, Joseph - MD
Gorczynski, Reginald - BA, BSc, MD, MA, PhD
Kish, Stephen John - BSc, MSc, PhD
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Levy, Gary - BSc, MD
Seeman, Mary - BA, MD, MDCH
Toner, Brenda - BA, MA, PhD
Weisel, Richard - BA, MD
Wiley, Mike - BSc, MSc, PhD
Yeger, Herman - BSc, MScPhm, PhD

Associate Members

Abdullah, Nadine - BS, MD
Abi-Jaoude, Elia - BSc, MSc, MD
Abrahao Junior, Agessandro - MSc, MSc, MD
Ali, Asim - MD
Andreazza, Ana Cristina - BPhm, MSc, PhD, PhD
Andrews, Mahmutoglu - MD
Anthony, Samantha - PhD
Aoyama, Kazuyoshi - MD
Asztalos, Elizabeth - BScN
Avila, Maria Laura - MD, PhD
Ballios, Brian G. - MD, PhD
Baribeau, Danielle - BSc, MD, PhD
Barnett Tapia, Carolina - DrMed
Bartoszko, Justyna - BS, MD, MSc
Bernardini, Marcus - BSc, MD, MSc
Bhalerao, Shree - MD
Bhat, Venkat - MSc, MD
Bogoch, Isaac - BSc, MD, MSc
Bouchard, Maryse - MDCM, MS
Brull, Richard - BS, MD
Burhan, Amer - MBChB, MSc
Chan, Steven - MD, PhD
Chepeha, Douglas - MD
Cheskes, Sheldon - BSc, DrMed
Cheung, Amy - BA, MSc, MD
Cheung, Helen - BSc, MD, PhD
Chintoh, Araba - MBBS, MSc, PhD
Chow, Edward - MBBS
Cil, Tulin - BSc, MEd, DrMed
Corrin, Michael - BA, BFA, BSc, MSc
Courtney, Darren - BSc, MD
Cushing, Sharon L. - BSc, MD
Das, Anirban - MBBS
Dash, Satya - MBBS, PhD
Delgado, Diego - MD
Desarkar, Pushpal - MD
Dickie, Erin - BSc, MSc, PhD
Dryer, Marc - BA, MSc
Dunkley, Benjamin - BSc, PhD
Emmenegger, Urban - MD
Farcas, Monica - BE, ME, MD
Felsky, Daniel - BSc, PhD
Ferguson, Sarah - BSc, MD
Fischer, Corinne - MD
Floh, Alejandro - MD
Forbes, Thomas - MD
Fralick, Michael - MD, PhD
Freeman, Sloan - MD
Furlan, Julio - MSc, DrMed, PhD
Gallagher, Damien - MB, MD

Gandhi, Sonal - BSc, MSc, MD
Giacobbe, Peter - MD
Goldstein, Benjamin - MD
Goldstein, Roger - MBChB
Goligher, Ewan - DrMed, PhD
Gomez Jaramillo, David - MD, PhD
Gonska, Tanja - MD
Grant, Robert - MD
Green, Robin - PhD
Gupta, Sumit - MD
Hahn, Cecil - MD
Hannon, Breffni - MB
Harnett, Nicole - BSc
Hassan, Ahmed - MBBS
Heyn, Chris - MD, PhD
Hiraki, Linda - MS, MD, ScD
Ho, Emily - BSc(OT), MEd, PhD, PhD
Hobson, Sebastian - BMedSc, MBBS, MPH, PhD
Holden, Lori - BSc
Husain, M. Omair - MBBS
Husain, Muhammad Ishrat - MBBS
Irish, Jonathan - MSc, MD
Ivers, Noah - MD
Jibb, Lindsay - PhD
Johnson, Sindhu - BMedSc, MD, PhD
Jung, James - BS, MD, PhD
Kahr, Walter - MD
Kalyvas, Aristotelis - MD, MS, PhD
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Karkouti, Keyvan - MD
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Kayssi, Ahmed - BA, BS, MPH, MS
Kertes, Peter - MD, MD
Kidd, Sean - PhD
Kim, Dong Hwan (Dennis) - MD, PhD
Kim, Raymond - MD
Knight, Andrea - MD
Ko, Michael - BSc, DrMed, PhD
Korczak, Daphne - BS, MD
Kridel, Robert - MPH, DrMed, PhD
Kulkarni, Abhaya - BSc, MD, PhD
Kumar, Rajat - DrMed
Kuruvilla, John - MD
Kuzyk, Paul - BSc, MD
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Le, Trung - MD
Lebel, David - MD, MS, PhD
Lee, Jason - BSc, MHPE, MD
Lee, Sun-Ho - MD
Lheureux, Stephanie - MD, MSc, MSc, PhD
Lim, David Wai - MDCM, MEd, PhD
Lincoln, Matthew - MD, PhD
Lo, Christopher - MA, PhD
Lofters, Aisha - BSc, MD, PhD
Luk, Cynthia Theresa - MD, PhD
Lunsky, Yona - PhD
Madani, Amin - BSc, MD, PhD
Magalhaes, Marco - MSc, BDS, PhD
Mah, Linda - MHSc, MD
Mailis-Gagnon, Angela - MSc, MD
Mansur, Rodrigo - MD, PhD
Maralani, Pejman Jabehdar - MD
Matheson, Flora - BA, MA, PhD
Matsuura, Naomi - ME, PhD
Mazierski, David - BSc, MSc
Melamed, Nir - MSc, MD
Melamed, Osnat - MD, MSc
Menon, Mahesh - PhD
Milosevic, Luka - PhD
Minian, Nadia - BA, MA, MPH, PhD
Muller, Matthew - MD
Naeem, Farooq - MBBS, MSc, PhD
Nelson, Kate - MD, PhD
Nestor, Sean - MSc, MD
Neufeld, Nicholas - BSc, MSc, MD
Ng, Derek - BSc, MSc, PhD
Nolan, Brodie - MD
Nowrouzi-Kia, Behdin - BSc, MSc
Nyhof-Young, Joyce - PhD
Oh, Jiwon - BSc, MD, PhD
Oliveira, Vanessa - BSc, MSc, PhD
Orkin, Julia - MD
Ortiz, Abigail - MSc, MD
Papsin, Blake Croll - BSc, MSc, MD
Parotto, Matteo - MD, PhD
Parsons, Janet - BA, BSc(PT), MSc, PhD
Pasternak, Jesse - BS, MD, MPH
Patel, Keyur - MD, PhD
Persaud, Navindra - BA, BSc, MD, MSc
Propst, Evan - BA, MSc, MD
Ramaswamy, Vijay - MD
Reich, Heather - MDCM, PhD
Retnakaran, Ravi - MD, MSc
Riazi, Sheila - MD, MSc
Richter, Peggy - MD
Rogalla, Patrik - MD
Rozenberg, Dmitry - MD, MedScD
Rudzicz, Frank - PhD
Rueda, Sergio - AM, MSc, PhD
Sage, Andrew - BS, MS, PhD
Saharan, Shehryar - BE, MSc
Sayed, Blayne - BA, MD, PhD
Schaffer, Ayal - MD
Schuh, Suzanne - MD
Selzner-Malekkiani, Nazia - MSc, PhD
Serban, Monica - BSc, PhD
Shafiee Nyestanak, Mohammad - MD
Shaikh, Furqan - MD
Shapiro, Gilla - BA, MPA, PhD
Shore, Eliane - BA, MD
Shulman, Rayzel - MD
Silversides, Candice - MSc, MD
Sloan, Matthew - MSc, MD
Sorbara, Julia - MD
Spence, Erik - PhD
Spithoff, Sheryl - BSc, MD
Stergiopoulos, Vicky - MHSc, MD
Strug, Lisa - BA, BS, SM, PhD
Tam, Emily - MD
Tang, Victor - BSc, MSc, MD
Tannenbaum, Evan - BSc, MD, MSc
Taylor, Edward - PhD
Thavendiranathan, Paaladinesh - BSc, MD, MSc
Tobe, Sheldon - BSc, MD
Touma, Zahi - BSc, MD, PhD
Trudeau, Maureen - BSc, MD, MA
Tsang, Yat - PhD
Unger, Sharon - MD, MD
Upton, Julia - MD
Van Mieghem, Tim - MD
Vanderlaan, Rachel - BS, MD, PhD, FRSC
Verma, Atul - BSc, BScMed, MD
Voineskos, Daphne - BSc, BMedSc, DrMed
Wainberg, Michael - BASc, MSc, PhD

Wall, Shelley - BA, MA, MSc, PhD
Wasserstein, David - BSc, MD, MSc
Weisz, Dany - MD
Wentlandt, Kirsten - BSc, MD, MHSA, PhD
Witheford, Miranda - BS, MD, PhD
Witterick, Ian - DrMed
Wong, Jean - MD
Wu, Robert - MD, MSc
Yeung, Jonathan - BS, MD, PhD
Zaheer, Juveria - AB, MSc, DrMed
Zai, Gwyneth - BSc, MSc, DrMed
Zani, Augusto - MD, PhD
Zheng, Chao - BSc, PhD
Zinman, Lorne - MD, MSc
Zrenner, Brigitte - DrMed
Zwingerman, Rhonda - BSc, MD, MSc

Medical Science: Biomedical Communications MScBMC

The **Master of Science in Biomedical Communications (MScBMC)** is a 24-month, course-based professional graduate program that prepares students for careers in the visual communication of science, medicine, and health. Students in this interdisciplinary program explore the use of images, interactive technologies, and animation/simulation to effectively communicate complex science and health topics to a range of audiences.

The program offers two fields: Biomedical Media Design and Biomedical Visualization Design. Students take the same courses in Year 1 and then choose their field at the start of the Summer session between Year 1 and Year 2.

Medical Science: Biomedical Communications MScBMC; Field: Biomedical Media Design

MScBMC; Field: Biomedical Media Design

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Institute of Medical Science's additional admission requirements stated below.
- Graduation from a recognized university with an appropriate four-year bachelor's degree that includes a variety of courses in the arts, sciences, and humanities.
- Minimum mid-B standing in the final two years of undergraduate study. Prerequisite courses: English (or an effective writing substitute); a humanities or social science course; biology; cell and molecular biology and/or histology; introductory physiology.
- At least one third- or fourth-year undergraduate course, or graduate course, from one or more of the following subject areas: Biochemistry, Cell Biology, Embryology, Genetics, Histology, Immunology, Molecular Biology, Pharmacology, or Physiology.
- Completion of a first-year undergraduate chemistry course with a lab and lecture component (for example, CHM135H1 *Chemistry: Physical Principles* or its equivalent).
- A high-quality portfolio of visual material; consult the MScBMC website for guidance.

Completion Requirements

- **Coursework.** Students must complete **8.5 full-course equivalents (FCEs)** including:
  - in Year 1, complete 5.0 FCEs:
    - MSC1001Y *Human Anatomy*
    - MSC2001Y *Visual Representation of Medical Knowledge*
    - MSC2003Y *Biomedical Communications Technologies*
    - MSC2004H *Research Methods*
    - MSC2009H *Ethics and Professionalism in Biomedical Communications*
    - MSC2020H *Visual Representation of Biomolecular Structure and Function*
    - MSC2023H *Information Visualization*
  - in Year 2, complete 1.5 FCEs:
    - MSC2002H *Sequential Medical Communication*
    - MSC2012H *Neuroanatomy for Visual Communication*
    - MSC2018H *Visual Representation of Processes in Human Pathology*
  - complete at least 1.0 FCE chosen from:
    - MSC2006H *Advanced Media Design Technologies*
    - MSC2008H *Community-Centred Design Research*
    - MSC2015H *Interpretive Visualization: Cinematic Design and Preproduction*
  - complete 1.0 FCE chosen from:
    - MSC2007H *Visual Synthesis of Medical/Scientific Process*
    - MSC2011H *Special Topics in Biomedical Communications*
    - MSC2013Y *Master's Research Project and Paper*
    - MSC2014H *Fundamentals of Scripting for Health Science Communication*
    - MSC2022H *Graphic Medicine Seminar*
    - or any other appropriate graduate course(s).
- Students must complete MSC2025Y ***Master's Research Project for BMC***.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Medical Science: Biomedical Communications MScBMC; Field: Biomedical Visualization Design

MScBMC; Field: Biomedical Visualization Design

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Institute of Medical Science's additional admission requirements stated below.
- Graduation from a recognized university with an appropriate four-year bachelor's degree that includes a variety of courses in the arts, sciences, and humanities.
- Minimum mid-B standing in the final two years of undergraduate study.
- At least one third- or fourth-year undergraduate course, or graduate course, from one or more of the following subject areas: Biochemistry, Cell Biology, Embryology, Genetics, Histology, Immunology, Molecular Biology, Pharmacology, or Physiology.
- Completion of a first-year undergraduate chemistry course with a lab and lecture component (for example, CHM135H1 *Chemistry: Physical Principles* or its equivalent).
- A high-quality portfolio of visual material; consult the MScBMC website for guidance.

Completion Requirements

- **Coursework.** Students must complete **8.5 full-course equivalents (FCEs)** as follows:
  - in Year 1, students must complete 5.0 FCEs:
    - MSC1001Y *Human Anatomy*
    - MSC2001Y *Visual Representation of Medical Knowledge*
    - MSC2003Y *Biomedical Communications Technologies*
    - MSC2004H *Research Methods*
    - MSC2009H *Ethics and Professionalism in Biomedical Communications*
    - MSC2020H *Visual Representation of Biomolecular Structure and Function*
    - MSC2023H *Information Visualization*
  - in Year 2, complete 1.5 FCEs:
    - MSC2002H *Sequential Medical Communication*
    - MSC2012H *Neuroanatomy for Visual Communication*
    - MSC2018H *Visual Representation of Processes in Human Pathology*
  - complete 1.0 FCE:
    - MSC2015H *Interpretive Visualization: Cinematic Design and Preproduction*
    - MSC2017H *Visualization Technology*
  - complete 1.0 elective FCE chosen from:
    - MSC2006H *Advanced Media Design Technologies*
    - MSC2007H *Visual Synthesis of Medical/Scientific Process*
    - MSC2011H *Special Topics in Biomedical Communications*
    - MSC2014H *Fundamentals of Scripting for Health Science Communication*
    - MSC2022H *Graphic Medicine Seminar*
    - or any other appropriate graduate course(s).
- Students must complete MSC2025Y ***Master's Research Project for BMC***.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Medical Science: Medical Science MSc

The MSc program is available in a wide range of basic sciences, clinical sciences, and population health research. Under the mentorship of a faculty member, a student receives specialized training and exposure to Toronto's finest multidisciplinary research. Students conduct research in one of six fields: Bioethics; Biomedical Science; Clinical Science; Health Professions Education; Population Health/Health Services; and Radiation Oncology.

The program emphasizes hands-on research, rather than coursework. Faculty conduct research in the following areas: cardiovascular sciences, bioethics, neuroscience, membrane biology, respiratory medicine, and psychosomatic medicine. The Institute of Medical Science (IMS) is the graduate unit of choice for undergraduates and MDs seeking training as clinician investigators, and graduates may seek positions as academics and health-care professionals in universities, government, and industry. The IMS participates in the Royal College of Physicians and Surgeons Clinical Investigator Program (CIP).

Students will complete the program in two years over six sessions.

Master of Science

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Institute of Medical Science's additional admission requirements stated below.
- An appropriate BSc or an MD degree from a recognized university and academic credentials and background preparation appropriate to the field of study. Qualified university graduates with a professional health science degree (for example, MD, BScN) or an undergraduate arts and science degree of appropriate background who wish to pursue graduate studies in basic or clinical biomedical sciences are encouraged to apply.
- Applicants lacking adequate background in biological, natural, or social sciences may be required to take undergraduate or graduate courses considered necessary to provide a proper basis for their research.

- A– (80%) average in the final year of undergraduate study and an A– cumulative average over three of the four total years of study.
- Applicants whose primary language is not English, and who graduated from a university where the language of instruction was not English, must demonstrate proficiency in the **English language** through the successful completion of one of the following English language proficiency tests:
  - **Test of English as a Foreign Language (TOEFL):**
    - a minimum score of 600 on the paper-based test and 5 on the Test of Written English (TWE); or
    - a minimum score of 100 on the Internet-based test and 25 on the writing and speaking sections.
  - **International English Language Testing System (IELTS):** minimum overall score of 7.5 with at least 6.5 in each component.
  - **Certificate of Proficiency in English (COPE):** minimum total of 86 with a minimum writing score of 32, reading score of 22, and listening score of 22. Test of Oral Proficiency assessment band = 7.

Completion Requirements

- **Coursework.** Students must complete a minimum of **2.0 graduate full-course equivalent (FCEs)** as follows:
  - MSC1010H *MSc Student Seminars in Translational Research*.
  - Attendance at the Ori Rotstein Lecture.
  - Completing the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS 2) Ethics Certificate.
  - Presenting at IMS Scientific Day.
  - MSC modular courses (two courses worth 0.25 FCE each).
  - 1.0 elective FCE.
- A **research thesis** and **oral thesis examination**.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Medical Science: Medical Science PhD

The PhD program is available in a wide range of basic sciences, clinical sciences, and population health research. Under the mentorship of a faculty member, a student receives specialized training and exposure to Toronto's finest multidisciplinary research. Students conduct research in one of six fields: Bioethics; Biomedical Science; Clinical Science; Health Professions Education; Population Health/Health Services; and Radiation Oncology.

The program emphasizes hands-on research, rather than coursework. Faculty conduct research in the following areas: cardiovascular sciences, bioethics, neuroscience, membrane biology, respiratory medicine, and psychosomatic medicine. The Institute of Medical Science (IMS) is the graduate unit of choice for undergraduates and MDs seeking training as clinician investigators, and graduates may seek positions as academics and health-care professionals in universities, government, and industry. IMS participates in the Royal College of Physicians and Surgeons Clinical Investigator Program (CIP).

Applicants may enter the PhD program via one of three routes: 1) following completion of a two-year, thesis-based MSc degree with a defended MSc thesis; 2) transfer from the IMS MSc program; or 3) direct entry following completion of an appropriate BSc or MD degree.

Completion of the PhD may take longer than the program length indicated below.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Institute of Medical Science (IMS)'s additional admission requirements stated below.
- Applicants whose primary language is not English, and who graduated from a university where the language of instruction and examination was not English, must demonstrate facility in the English language through the successful completion of one of the following English-language proficiency tests:
  - Test of English as a Foreign Language (TOEFL):
    - a minimum score of 600 on the paper-based test and 5 on the Test of Written English (TWE); or
    - a minimum score of 100 on the Internet-based test and 25 on the writing and speaking sections.
  - International English Language Testing System (IELTS): minimum overall score of 7.5 with at least 6.5 in each component.
  - Certificate of Proficiency in English (COPE): minimum total score of 86 with minimum writing score of 32, reading score of 22, and listening score of 22. Test of Oral Proficiency assessment band = 7.
- Applicants may be accepted into the PhD program after completing a two-year, thesis-based MSc degree (with a defended MSc thesis) with at least an A– standing from a recognized university.

Completion Requirements

- Coursework. Students must complete a minimum of **2.0 graduate full-course equivalents (FCEs)** as follows:
  - MSC1011H *PhD Student Seminars in Translational Research*.
  - Attendance at the Ori Rotstein Lecture*
  - Completing the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS 2) Ethics Certificate*
  - Presenting at IMS Scientific Day*
  - MSC modular courses (two courses worth 0.25 FCE each).
  - 1.0 elective FCE.
  - Students may be required to take extra courses in addition to the degree requirements.
- Students must pass a **qualifying examination** within 18 to 21 months of starting the program.

- A **research thesis** must be submitted, and the student must pass an **IMS departmental oral examination** before proceeding to the **Doctoral Final Oral Examination** conducted by the School of Graduate Studies.
- At the end of Year 3, students must have completed all program requirements exclusive of the thesis research in order to achieve candidacy.
- In cases where a student's prior academic background may have covered any of the courses listed above, substitutions will be required. Such substitutions can include any courses in IMS. For courses taken outside of this graduate unit, students should consult with their Graduate Coordinator.

*Students who have completed these requirements previously as part of their conferred IMS master's degree are exempt from these requirements.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- Applicants may be accepted into the PhD program via transfer from the University of Toronto MSc program. Outstanding students may be considered for reclassification/transfer into the PhD program without writing an MSc thesis.

Completion Requirements

- Students must complete **3.0 graduate full-course equivalents (FCEs)** as follows:
  - MSC1010H *MSc Student Seminars in Translational Research*.
  - Attendance at the Ori Rotstein Lecture.
  - Completing the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS 2) Ethics Certificate.
  - Presenting at IMS Scientific Day.
  - MSC modular courses (two courses worth 0.25 FCE each).
  - 1.0 elective FCE with a minimum A– average.
  - The student will be evaluated in an **oral transfer examination** within 18 to 21 months of initial graduate registration.
  - The successful applicant will enter the PhD program and complete:
    - MSC1011H *PhD Student Seminars in Translational Research* if credit for MSC1010H has not been obtained prior to transfer.
    - 1.0 elective FCE.
- A **research thesis** must be submitted, and the student must pass an **IMS departmental oral examination** before proceeding to the **Doctoral Final Oral Examination** conducted by the School of Graduate Studies.
- At the end of Year 3, students must have completed all program requirements exclusive of the thesis research in order to achieve candidacy.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Institute of Medical Science (IMS)'s additional admission requirements stated below.
- Applicants whose primary language is not English, and who graduated from a university where the language of instruction and examination was not English, must demonstrate facility in the English language through the successful completion of one of the following English-language proficiency tests:
  - Test of English as a Foreign Language (TOEFL):
    - a minimum score of 600 on the paper-based test and 5 on the Test of Written English (TWE); or
    - a minimum score of 100 on the Internet-based test and 25 on the writing and speaking sections.
  - International English Language Testing System (IELTS): minimum overall score of 7.5 with at least 6.5 in each component.
  - Certificate of Proficiency in English (COPE): minimum total score of 86 with minimum writing score of 32, reading score of 22, and listening score of 22. Test of Oral Proficiency assessment band = 7.
- Students are accepted via direct entry into the PhD program after completing an appropriate BSc or an MD degree, without completing a two-year, thesis-based MSc degree.

Completion Requirements

- **Coursework.** Students must complete a minimum of **3.0 graduate full-course equivalents (FCEs)** as follows:
  - MSC1011H *PhD Student Seminars in Translational Research*.
  - Attendance at the Ori Rotstein Lecture.
  - Completing the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS 2) Ethics Certificate.
  - Presenting at IMS Scientific Day.
  - MSC modular courses (two courses worth 0.25 FCE each).
  - 2.0 elective FCEs.
  - Students may be required to take extra courses in addition to the degree requirements.
- Students must pass a **qualifying examination** within 18 to 21 months of starting the program.
- A **research thesis** must be submitted, and the student must pass an **IMS departmental oral examination** before proceeding to the **Doctoral Final Oral Examination** conducted by the School of Graduate Studies.

- At the end of Year 4, students must have completed all program requirements exclusive of the thesis research in order to achieve candidacy.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Medical Science: Health Research GDipHR

The Graduate Diploma in Health Research provides a select group of medical students high-quality training in health research in order to understand, interpret, and apply the rapid changes in the scientific underpinnings of health care. Future physicians will gain skills relevant to contributing to health-related studies in their future careers, some of whom will become leaders of health research. Taken concurrently with the MD program, the Graduate Diploma in Health Research aims to engage medical students in health research with the intent to develop applicable knowledge and skills that will inform and support a future career in any field of health research.

Graduate Diploma in Health Research

Minimum Admission Requirements

- Diploma students must meet the School of Graduate Studies minimum admission requirements for master's-level diploma programs. Applicants must be enrolled, and in good academic standing, in Year 1 of the MD program of the Temerty Faculty of Medicine of the University of Toronto.
- Applicants must submit the following:
  - curriculum vitae (CV)
  - a personal statement explaining their interest in the program
  - written confirmation of Good Standing in the MD program (letter from the program, signed by the Registrar or Vice-Dean
  - undergraduate and/or graduate academic transcripts.

Completion Requirements

- Students must complete a total of **2.5 full-course equivalents (FCEs)** as follows:
  - Two required courses (2.0 FCEs):
    - MSC1991Y *Supervised Research Project*.
    - MSC1992Y *Research Skills for the Physician-Scientist*.
  - 0.5 elective FCE selected from an approved list. Substitution of any other graduate-level course relevant to the student's research course but not found on the approved list will require completion of a course exemption form signed by the Institute of Medical Science's Graduate Coordinator. The selection of the course will be done in consultation with the Program Director.
- Students must maintain good academic standing in the MD program throughout.

Mode of Delivery: In person
Program Length: 5 sessions part-time (typical registration sequence: WS-FWS)

Medical Science: Biomedical Communications MScBMC Courses

Consult the department each session regarding course offerings.

Required Courses

Course Code	Course Title
MSC1001Y	Human Anatomy
MSC2001Y	Visual Representation of Medical Knowledge
MSC2002H	Sequential Medical Communication
MSC2003Y	Biomedical Communications Technologies
MSC2004H	Research Methods
MSC2009H	Ethics and Professionalism in Biomedical Communications
MSC2012H	Neuroanatomy for Visual Communication
MSC2018H	Visual Representation of Processes in Human Pathology
MSC2020H	Visual Representation of Biomolecular Structure and Function
MSC2023H	Information Visualization
MSC2025Y	Master's Research Project for BMC

Elective Courses

Students are encouraged to take at least one of their electives in a graduate program other than Biomedical Communications.

Course Code	Course Title
MSC2006H	Advanced Media Design Technologies
MSC2007H	Visual Synthesis of Medical/Scientific Process
MSC2008H	Community-Centred Design Research
MSC2011H	Special Topics in Biomedical Communications
MSC2013Y	Master's Research Project and Paper
MSC2014H	Fundamentals of Scripting for Health Science Communication
MSC2015H	Interpretive Visualization: Cinematic Design and Preproduction
MSC2017H	Visualization Technology

Course Code	Course Title
MSC2022H	Graphic Medicine Seminar
MSC2026H	Biomedical 2D Animation and Motion Design

Medical Science: Health Research GDipHR Courses

Core Courses

Course Code	Course Title
MSC1991Y	Supervised Research Project
MSC1992Y	Research Skills for the Physician-Scientist

Approved Elective Courses by Graduate Unit

Health Policy, Management and Evaluation (Dalla Lana School of Public Health)

Course Code	Course Title
HAD5301H	Introduction to Clinical Epidemiology and Health Care Research
HAD5744H	Quantitative Methods in HSR I
HAD6760H	Introduction to Health Services and Systems Research Theory and Methods
MHI3000H	Independent Reading for Health Informatics

Laboratory Medicine and Pathobiology (Temerty Faculty of Medicine)

Course Code	Course Title
LMP1100H	Cellular Imaging in Pathobiology
LMP1103H	Tissue Injury, Repair, and Regeneration
LMP1202H	Inflammation, Immunity, and Immunopathology of Atherosclerosis
LMP1205H	The Role of Genomics in the Era of Personalized Medicine
LMP1206H	Next Generation Genomics in Clinical Medicine
LMP1207H	Mass Spectrometry, Proteomics, and Their Clinical Applications
LMP1208H	Molecular Clinical Microbiology and Infectious Diseases
LMP1209H	Neurodegenerative Disease — Mechanisms, Models, and Methods
LMP1504H	Cell and Molecular Biology of Cardiovascular Diseases
LMP1510H	Molecular Biology Techniques

Medical Science (Temerty Faculty of Medicine)

Course Code	Course Title
JCV3060H	Advanced Topics in Cardiovascular Sciences — Molecular Biology and Heart Signal Transduction
JCV3061H	Advanced Topics in Cardiovascular Sciences — Hormones and the Cardiovascular System
JCV3062H	Advanced Topics in Cardiovascular Sciences — Heart Function
JCV3063H	Advanced Topics in Cardiovascular Sciences — Vascular
MSC1081H	Studies in Schizophrenia
MSC1087H	Neuroimaging Methods Using Magnetic Resonance Imaging
MSC1089H	The Biopsychosocial Basis of Mental Health and Addictive Disorders

Medical Science: Medical Science MSc, PhD Courses

Not all courses are offered each year. Check the departmental website for course availability.

Course Code	Course Title
JCR1000Y	An Interdisciplinary Approach to Global Challenges
JCV1060H	Developmental Cardiovascular Physiology
JCV3060H	Advanced Topics in Cardiovascular Sciences — Molecular Biology and Heart Signal Transduction
JCV3061H	Advanced Topics in Cardiovascular Sciences — Hormones and the Cardiovascular System
JCV3062H	Advanced Topics in Cardiovascular Sciences — Heart Function
JCV3063H	Advanced Topics in Cardiovascular Sciences — Vascular
JCV3065H	Advanced Topics in Cardiovascular Sciences — Systems Biology

Course Code	Course Title
JDB1024Y	Topics in Developmental Biology (MSc)
JDB1025H	Developmental Biology (PhD)
JDB1026Y	Student Seminars in Developmental Biology (PhD)
JNP1016H	Graduate Seminar in Toxicology
JNP1017H	Current Topics in Molecular and Biochemical Toxicology
JNP1018H	Molecular and Biochemical Basis of Toxicology
JNP1019H	Biomedical Toxicology
JNP1020H	Interdisciplinary Toxicology
JNR1444Y	Fundamentals of Neuroscience — Cellular and Molecular
JNS1000Y	Fundamentals of Neuroscience — Systems and Behaviour
LMP1211H	Foundations in Musculoskeletal Science
MSC1001Y	Human Anatomy
MSC1004H	Health and Pharmaceuticals
MSC1005H	Therapeutic Approaches in Mood and Anxiety Disorders
MSC1006H	Neuroanatomy
MSC1008H	Advanced Human Embryology and Teratology
MSC1010H	MSc Student Seminars in Translational Research
MSC1011H	PhD Student Seminars in Translational Research
MSC1030H	Learning from Data — Introduction to Study Design and Statistical Analysis Methods
MSC1040H	Physiologic Basis of Disease
MSC1081H	Studies in Schizophrenia
MSC1085H	Molecular Approaches to Mental Health and Addictions
MSC1087H	Neuroimaging Methods Using Magnetic Resonance Imaging
MSC1089H	The Biopsychosocial Basis of Mental Health and Addictive Disorders
MSC1090H	Introduction to Computational Biostatistics with R
MSC1100H	Success in Graduate School: a Professional Development Module for MSc Students
MSC1101H	Success After Graduate School: a Professional Development Module for PhD Students
MSC1102H	Psychiatric Implications of Traumatic Brain Injury
MSC1103H	Knowledge Translation
MSC1104H	Neurodegenerative Disease
MSC1105H	Clinical Trials
MSC1106H	GREAT Network Epidemiology, Biostatistics, and Surveillance Practicum
MSC1107H	Biostatistics in a Nut Shell
MSC1108H	Animal Models of Human Diseases
MSC1109H	Introduction to Neuroimaging
MSC1110H	Strategic Training in Transdisciplinary Radiation Science for 21st Century
MSC1111H	Strategies for Systematic, Scoping, or Other Comprehensive Searches of Literature
MSC1113H	Radiomics and Machine Learning for Medical Imaging
MSC1114H	Artificial Intelligence in Medicine
MSC1115H	Digital Image Analysis for Cellular Microscopy
MSC1116H	Individualized Reading/Research Course
MSC1117H	Light Microscopy Basics for Life Sciences
MSC1118H	Natural Language Processing for Medicine
MSC1119H	Epigenetics Applications in Human Health and Disease
MSC1120H	Gene Expression Profiling with Real Time PCR
MSC1121H	Clinical Research Skills
MSC1122H	Startups in the Medical Sciences
MSC2003Y	Biomedical Communications Technologies
MSC2010Y	Molecular Medicine in Human Genetic Disease
MSC2020H	Visual Representation of Biomolecular Structure and Function
MSC4001H	Foundations in Resuscitation Science Research
MSC6000H	Individualized Reading/Research Course
MSC7000Y	Regenerative Medicine
PCL3100H	Behavioural Pharmacology I
PCL3101H	Behavioural Pharmacology II

Medieval Studies

Medieval Studies: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Medieval Studies

MA and PhD

- Fields:
  - Auxiliary Sciences;
  - History and Religion;
  - Language and Literature;
  - Music and Art;
  - Philosophy and Theology

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Ancient and Medieval Philosophy**
  - Medieval Studies, PhD
- **Book History and Print Culture**
  - Medieval Studies, MA, PhD
- **Food Studies**
  - Medieval Studies, PhD
- **Jewish Studies**
  - Medieval Studies, MA, PhD
- **Sexual Diversity Studies**
  - Medieval Studies, MA, PhD
- **Women and Gender Studies**
  - Medieval Studies, MA, PhD

Overview

The Centre for Medieval Studies is concerned with the history, thought, and artistic expression of the various cultures of Europe and adjacent regions over the course of a millennium (circa 500 to 1500). The Centre for Medieval Studies in Toronto has an international reputation, resting on the wide-ranging interests of its faculty, the caliber and preparation of its graduates, and its outstanding library facilities.

The Centre for Medieval Studies provides interdepartmental programs in the medieval period. Students are expected to cross the limits of traditional subjects, and research is especially encouraged in often-neglected boundary areas between traditional departments.

The centre offers its students training in basic skills and tools in order to read the materials remaining from the medieval past and to explore them with learning and imagination. All students entering the centre are asked to improve their proficiency in Latin before registration, since there are Medieval Latin requirements for all degrees. Examinations in Medieval Latin are set at the beginning of the Fall session and at the end of the Spring session. All incoming students must take the Level One Latin examination at the beginning of the Fall session for placement purposes.

Contact and Address

Web: medieval.utoronto.ca
Email: medieval.studies@utoronto.ca
Telephone: (416) 978-4884

Centre for Medieval Studies
University of Toronto
3rd Floor, 125 Queen's Park
Toronto, Ontario M5S 2C7 Canada

Medieval Studies: Graduate Faculty

Full Members

Akbari, Suzanne - BA, MA, MPH, PhD
Andrée, Alexander - BA, PhD
Bartlett, Kenneth - BA, MA, PhD
Black, Deborah - BA, MA, PhD
Bowen, William - BA, BMus, MA, PhD
Brilli, Elisa - MA, PhD ***(Director)***
Caskey, Jill - AB, MA, MPH, PhD
Cochelin, Isabelle - DipdESup, BA, MA, PhD
Cohen, Adam - PhD
Dewar, Michael - BA, MA, DPhil
Dimnik, Martin - BA, MA, MDiv, DPhil
Everett, Nicholas - BA, MA, PhD
Gaston, Kara Susan - BA, MPH, PhD
Gervers, Michael - BA, MA, PhD
Ghosh, Shami - BA, MA, PhD
Gillespie, Alexandra - BA, BSc, PhD
Ginther, James - BA, MA, PhD
Guenther, Sebastian - MA, PhD
Haines, John - BSc, BA, MA, PhD
Hall, Bert - BA, PhD
Herren, Michael - PhD
Holmstedt, Robert - BA, MA, PhD
Iglesias, Yolanda - BA, BA, MA, PhD
Keith, Alison - BA, MA, PhD, FRSC
King, Peter - BA, PhD
Kivimae, Juri - AM, PhD
Kullmann, Dorothea - PhD
Magee, John - BA, MA, PhD
Meyerson, Mark - BA, PhD
Michelet Pickavé, Fabienne L. - MPH, LèsL, LittD
Miles, Brent - PhD
Percy, Carol - BA, MA, DPhil
Pickavé, Martin - MA, PhD
Pierno, Franco - BA, MA, PhD
Robins, William - BA, MPH, PhD
Ross, Jill - BA, MA, PhD
Rozemond, Marleen - BA, PhD

Saleh, Walid - BA, MA, PhD
Schallert, Joseph - PhD
Silano, Giulio - BA, BEd, LLB, MA, PhD
Smith, Kyle - BA, MA, PhD
Stock, Markus - MA, PhD
Subtelny, Maria - BA, PhD
Terpstra, Nicholas - BA, MA, PhD
Trilling, Renee - MA, PhD
Welsh, Jarrett - BA, MA, PhD

Members Emeriti

Burke, James - BA, MA, PhD
Dutka, JoAnna - BA, MA, PhD, ARCT
Eisenbichler, Konrad - BA, MA, PhD
Farge, James - BA, MA, PhD
Frank, Roberta - BA, MA, PhD
Goffart, Walter - AB, AM, PhD
Hillgarth, Jocelyn - BA, MA, PhD
Jeauneau, Edouard - BTh, PhD
Johnston, Alexandra - PhD
Kaczynski, Bernice - BA, MPH, PhD
Mayer, Hartwig - PhD, PhD
McConica, James - BA, STB, MA, DPhil, FRHistS
McDonough, Christopher - BA, MA, PhD
McDougall, Ian C. - BA, MA, PhD
Pietropaolo, Domenico - BSc, MA, PhD
Stock, Brian - AB, PhD
Taylor, Robert - PhD

Associate Members

Billett, Jesse Dean - AB, MPH, PhD
Dinkova-Bruun, Greti - MA, PhD
Hadisi, Reza - PhD
More, Alison - BA, MA, PhD
Murray, Jaqueline - PhD
O'Hogan, Cillian - PhD
Pelle, Stephen - BA, MA, PhD
Rasmussen, Ann Marie - BA, PhD
Roest, Bert - BA, MA, MA, PhD
Sweetman, Robert - BA, MA, PhD

Medieval Studies: Medieval Studies MA

Students may be admitted to a one-year MA program as full-time or part-time.

Students may obtain an MA in Medieval Studies by coursework or by a combination of coursework plus thesis.

MA Program (Coursework Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Centre for Medieval Studies' additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with an average grade of at least a B+ in previous courses. Coursework in the medieval period must have formed part of the program.
- Applicants are required to have taken at least one full-year Latin introductory course with a grade of at least B+ or equivalent.
- Applicants for the MA degree, full-time and part-time, must:
  - Follow the application instructions on the department's website.
  - Complete forms in which they state the reasons for undertaking graduate studies in the medieval area and their qualifications for applying to do so.

Completion Requirements

- MA students must pass the Level One Medieval Latin examination upon arrival or else attain credit in MST1000Y in the first year of enrolment in the MA program.
- For the **coursework option**, students:
  - Who pass the Level One Latin examination upon arrival must successfully complete 3.0 FCEs.
  - Who do not pass the Level One Latin examination on arrival must successfully complete 4.0 FCEs (including MST1000Y).
- In the MA program, course training in Latin is given at two levels. All students are expected to arrive with knowledge equivalent to at least a first-year university course in Latin language. MST1000Y *Medieval Latin I* is the MA-level course. While this course is preparatory to the departmental Level One Latin examination, a pass in the course does not guarantee a pass of the departmental examination at the corresponding level. Advanced seminars are open to those MA students who have achieved a pass of the Level Two Latin examination.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MA Program (Coursework-Plus-Thesis Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Centre for Medieval Studies' additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with an average grade of at least a B+ in previous courses. Coursework in the medieval period must have formed part of the program.
- Applicants are required to have taken at least one full-year Latin introductory course with a grade of at least B+ or equivalent.
- Applicants for the MA degree, full-time and part-time, must:

- Follow the application instructions on the department's website.
- Complete forms in which they state the reasons for undertaking graduate studies in the medieval area and their qualifications for applying to do so.

Completion Requirements

- MA students must pass the Level One Medieval Latin examination upon arrival or else attain credit in MST1000Y in Year 1 of the MA program.
- For the **coursework-plus-thesis option**, students must successfully complete:
  - Coursework: 3.0 FCEs or 2.0 FCEs plus a pass at the Level One Latin examination upon arrival in the program.
  - A thesis. An MA thesis must be on a topic approved by the Centre for Medieval Studies. The topic must be submitted to the Centre by November 30 of the MA year.
- In the MA program, course training in Latin is given at two levels. All students are expected to arrive with knowledge equivalent to at least a first-year university course in Latin language. MST1000Y *Medieval Latin I* is the MA-level course. While this course is preparatory to the departmental Level One Latin examination, a pass in the course does not guarantee a pass of the departmental examination at the corresponding level. Advanced seminars are open to those MA students who have achieved a pass of the Level Two Latin examination.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Medieval Studies: Medieval Studies PhD

The PhD is offered only on a full-time basis. Applicants may enter the PhD program via one of two routes: 1) following completion of a master's degree in medieval studies or a related field; or 2) direct entry after completing an appropriate bachelor's degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Centre for Medieval Studies (CMS)'s additional admission requirements stated below.
- Applicants enter with a master's degree in medieval studies or a related field from a recognized university with an average grade of at least A– in the applicant's overall program. Students in the CMS MA program must apply formally for admission to the PhD program on the same basis as all other applicants.
- All applicants must:
  - Follow the application instructions on the department's website.
  - Complete the forms in which they state the reasons for undertaking graduate studies in the medieval area and their qualifications for applying to do so.
  - Pass the Level One Latin examination before they register in the PhD program.

Completion Requirements

- During Years 1 and 2, students must take a minimum of **3.0 full-course equivalents (FCEs)**, i.e., 2.0 FCEs in a major field and 1.0 FCE in a minor field. In view of the CMS's interdepartmental nature, some of these courses on the Middle Ages can be taken in other departments, with the approval of the PhD coordinator. MST1001Y may not be counted towards the 1.0 FCE minor field requirements or included in the 3.0 FCEs minimum for the degree; but it must be taken in addition to the 3.0 FCEs minimum by all those who do not pass the Level Two Latin examination right before or upon arrival in the program. In addition to the 3.0 FCEs minimum, MST1003H *Professional Development for Medieval Studies PhDs* must be taken by all students over the course of the first three years of registration.
- In the PhD program, course training in Latin is given at two levels. MST1001Y *Medieval Latin II* is the PhD-level course. While this course is preparatory to the departmental Level Two Latin examination, a pass in the course does not guarantee a pass of the departmental examination at the corresponding level. Advanced seminars are open to those with either prior credit in MST1001Y or else a pass of the Level Two Latin examination. These seminars thus serve both advanced students of medieval Latin as well as those who have passed MST1001Y but require further training in order to achieve the Level Two Latin examination pass.
- By the end of the Fall session of Year 2, students should have a full **Advisory Committee**, consisting of a supervisor and two other members. The Advisory Committee must be formally approved by the PhD coordinator.
- During the Spring session of the same academic year, students should develop the **Special Field Proposal** in consultation with the Advisory Committee. The proposal must be prepared according to CMS guidelines and consists of three documents:
  - The Reading List (minimum 150 and maximum 250 items, including both primary and secondary sources) — should be submitted to the Advisory Committee members by June 30 of Year 2.
  - A brief (one to two pages) description of scope of the Reading List.
  - The Special Field Proposal Form, which alone should be submitted to the PhD coordinator and graduate administrator at this time.
- **Special Field Examination**: the purpose is to demonstrate both the student's scholarly expertise in the particular area of doctoral dissertation and a broader academic competence. The Special Field Examination consists of the following:
  - The Field paper (approximately 8,000 to 12,000 words, including footnotes) — should be submitted to the Advisory Committee members and the CMS Executive Committee for approval by January 15 of Year 3.

    - The Syllabus — should be submitted, together with the final version of the Field paper, to the Advisory Committee members by March 31 of Year 3.
    - The Special Field Examination — a two-hour-long oral exam to be held by April 30 of Year 3, and graded on a pass/fail basis. The Advisory Committee, in consultation with the Executive Committee, has the discretion to determine if a student may retake the Special Field Examination. Only one retake is permitted and must take place within two months of the first exam. Students who do not pass the Special Field Examination before the beginning of Year 4 will be recommended to SGS for termination of registration.
- Students must pass the **Level Two Latin examination** and the CMS's **examinations in the French and German languages** before moving on to the Special Field Examination. In exceptional cases, a student may petition to replace one of the modern languages (French and German) with another language in their area of research. A written request, with a signed confirmation of support for the petition from the supervisor, must be submitted as early as possible, and no later than the end of the Fall session of Year 2 for consideration by the Executive Committee. In the case of a successful petition, the student will be expected to take the exam no later than the next examination date. Such substitute examinations will be offered no more than two times per year (April and September). Failure to pass all the language exams by the end of Year 3 leads to an automatic failure of the Special Field Examination and thus, to termination from the program.
- The candidate will be required to defend the dissertation at the **Doctoral Final Oral Examination**.
- It is possible to complete a PhD in Medieval Studies in four years, but most students, depending on their background preparation, find that it takes at least five years.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Centre for Medieval Studies (CMS)'s additional admission requirements stated below.
- Applicants enter with an appropriate bachelor's degree from a recognized university with an average grade of at least A– in the applicant's overall program. Coursework in the medieval period must have formed part of the program.
- All applicants must:
    - Follow the application instructions on the department's website.
    - Complete the forms in which they state the reasons for undertaking graduate studies in the medieval area and their qualifications for applying to do so.
    - Pass the Level One Latin examination before they register in the PhD program.

Completion Requirements

- During Years 1, 2, and 3, students must take a minimum of **5.0 full-course equivalents (FCEs)**, including 2.0 FCEs in a major field and 1.0 FCE in a minor field. In view of the CMS's interdepartmental nature, some of these courses on the Middle Ages can be taken in other departments, with the approval of the PhD coordinator. MST1001Y may not be counted towards the 1.0 FCE minor field requirements or included in the 5.0 FCEs minimum for the degree, but it must be taken in addition to the 5.0 FCEs minimum by all those who do not pass the Level Two Latin examination right before or upon arrival in the program. In addition to the 5.0 FCEs minimum, MST1003H *Professional Development for Medieval Studies PhDs* must be taken by all students over the course of the first three years of registration.
- In the PhD program, course training in Latin is given at two levels. MST1001Y *Medieval Latin II* is the PhD-level course. While this course is preparatory to the departmental **Level Two Latin examination**, a pass in the course does not guarantee a pass of the departmental examination at the corresponding level. Advanced seminars are open to those with either prior credit in MST1001Y or else a pass of the Level Two Latin examination. These seminars thus serve both advanced students of medieval Latin as well as those who have passed MST1001Y but require further training in order to achieve the Level Two Latin examination pass.
- By the end of the Fall session of Year 3, students should have a full Advisory Committee, consisting of a supervisor and two other members. The Advisory Committee must be formally approved by the PhD coordinator.
- During the Spring session of the same academic year, students should develop the **Special Field Proposal** in consultation with the Advisory Committee. The proposal must be prepared according to CMS guidelines and consists of three documents:
    - The Reading List (minimum 150 and maximum 250 items, including both primary and secondary sources) — should be submitted to the Advisory Committee members by June 30 of Year 2.
    - A brief (one to two pages) description of scope of the Reading List.
    - The Special Field Proposal Form, which alone should be submitted to the PhD coordinator and graduate administrator at this time.
- **Special Field Examination**: the purpose is to demonstrate both the student's scholarly expertise in the particular area of doctoral dissertation and a broader academic competence. The Special Field Examination consists of the following:
    - The Field paper (approximately 8,000 to 12,000 words, including footnotes) — should be submitted to the Advisory Committee members and the CMS Executive Committee for approval by January 15 of Year 3;
    - The Syllabus — should be submitted, together with the final version of the Field paper, to the Advisory Committee members by March 31 of Year 3.

    - The Special Field Examination — a two-hour-long oral exam to be held by April 30 of Year 3, and graded on a pass/fail basis. The Advisory Committee, in consultation with the Executive Committee, has the discretion to determine if a student may retake the Special Field Examination. Only one retake is permitted and must take place within two months of the first exam. Students who do not pass the Special Field Examination before the beginning of Year 4 will be recommended to SGS for termination of registration.
- Students must pass the **Level Two Latin examination** and the CMS's **examinations in the French and German languages** before moving on to the Special Field Examination. In exceptional cases, a student may petition to replace one of the modern languages (French and German) with another language in their area of research. A written request, with a signed confirmation of support for the petition from the supervisor, must be submitted as early as possible, and no later than the end of the Fall session of Year 2 for consideration by the Executive Committee. In the case of a successful petition, the student will be expected to take the exam no later than the next examination date. Such substitute examinations will be offered no more than two times per year (April and September). Failure to pass all the language exams by the end of the Spring session of Year 4 leads to an automatic failure of the Special Field Examination and thus to termination from the program.
- The candidate will be required to defend the dissertation at the **Doctoral Final Oral Examination**.
- It is possible to complete a direct-entry PhD in Medieval Studies in five years but some students, depending on their background preparation, find that it takes longer than five years. Students intending to work in an area of medieval studies that requires the acquisition of one or more extra languages may find that it is not possible to complete a doctorate within five years.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Medieval Studies: Medieval Studies MA, PhD Courses

Not all courses are offered every year. Please consult the Centre for Medieval Studies (CMS)' website which lists the courses that will be offered this year as well as those offered by associated departments. A graduate course is understood to require at least two hours per week of class meeting and such research hours as may be required.

Art History

Course Code	Course Title
FAH1118H	The Medieval Treasury
FAH1119H	Global Medieval Art in China
FAH1127H	Early Medieval Art

Book History and Print Culture

Course Code	Course Title
BKS1001H	Introduction to Book History
BKS1002H	Book History in Practice
BKS2000H	Advanced Seminar in Book History and Print Culture
BKS2001H	Individual Practicum in Book History and Print Culture

Classics

Course Code	Course Title
CLA5007H	Criticism of Latin Poetry

Comparative Literature

Course Code	Course Title
COL5032H	Feminist Approaches to Medieval Literature
COL5086H	Literature, Culture, and Contact in Medieval Iberia

English

Course Code	Course Title
ENG1001H	Old English I
ENG1002H	Introduction to Old English II: Beowulf
ENG1551H	The Canterbury Tales

French Language and Literature

Course Code	Course Title
FRE1164H	Initiation au français médiéval
FRE1203H	Séminaire de littérature II : période

Germanic Languages and Literatures

Course Code	Course Title
GER1200H	Middle High German

History

Course Code	Course Title
HIS1213H	Medieval Institutes of Perfection
HIS1215H	Social Change in Medieval England, 1154–1279
HIS1221H	Topics in Early Modern European Social History

Italian Studies

Course Code	Course Title
ITA1200H	Dante
ITA1202H	Dante as a Reader of Augustine's City of God: Augustinian Textual Communities at the Beginning of the 14th Century
ITA1203H	Boccaccio
ITA1330H	Petrarch and Petrarchism
ITA1535H	Topics in Italian Literature
ITA1540H	Renaissance Italian Theatre
ITA1597H	The Commedia dell'Arte

Medieval Studies

Course Code	Course Title
MST1000Y	Medieval Latin I
MST1001Y	Medieval Latin II
MST1002H	Advanced Medieval Latin
MST1003H	Professional Development for Medieval Studies PhDs
MST1015H	Medieval Representations of Sexual Dissidence
MST1020H	The Medieval Latin Epic
MST1021H	The Bibliographic Imagination in the Middle Ages
MST1022H	Transmission and Reception: the Survival and Use of the Latin Classics
MST1023H	Early Medieval Latin and Greek Poetry
MST1101H	Codicology
MST1102H	Practical Palaeography
MST1104H	Latin Palaeography I
MST1105H	Latin Palaeography II
MST1107H	Latin Textual Criticism
MST1110H	Diplomatics and Diplomatic Editing
MST1115H	English Palaeography
MST1117H	Medieval English Handwriting, 1300–1500
MST1372H	Why Europe Grew Rich and Asia Did Not: the Great Divergence Debate
MST1373H	English Language and Literature in Transition, 1100–1250
MST1383H	Poetry and Prose of the Vercelli Book
MST1384H	The Exeter Book of Old English Verse
MST1388H	The Junius Manuscript: Old Testament Narratives
MST1398H	Alfredian Prose
MST1422H	Introduction to the Study of Magic in the Middle Ages
MST2001H	Old Saxon
MST2007H	Old High German
MST2010H	Old Norse
MST2018H	Celtic and Hiberno-Latin
MST2029H	Old Irish I
MST2030H	Old Irish II
MST2031H	Topics in Medieval Celtic Literature
MST2032H	Medieval Irish Poetry 500–1600
MST2033H	Textual Studies in Medieval Irish Poetry
MST2037H	Legendary History of Britain and Ireland
MST2038H	Medieval Brittany
MST2040H	Beginnings of Medieval Rhetoric and Poetics
MST2042H	Medieval Literary Theory in the Later Middle Ages
MST2048H	Music in Medieval Life
MST2051H	Middle Welsh I
MST2052H	Middle Welsh II
MST2055Y	Studies in Middle Welsh Texts
MST3015H	Introduction to Ge'ez (Classical Ethiopic)
MST3016H	Intermediate Ge'ez (Classical Ethiopic)

Course Code	Course Title
MST3021H	Boethius
MST3022H	Consolation Through the Ages: Later Medieval Approaches to Boethius's Consolation of Philosophy
MST3035H	Medieval Representations of Death, Sickness, and Crime (1100–1500)
MST3123H	Introduction to Medieval Medicine
MST3124H	Medieval Studies in the Digital Age
MST3126H	The Apocalypse in Medieval English Literature
MST3127H	Texts and the City in Medieval Northern Europe
MST3135H	Digital Old English
MST3140Y	Medieval Catalan Language and Literature
MST3150H	Medieval French Epic: Kings and Heroes
MST3152H	Medieval Occitan I
MST3153H	Medieval Occitan II — Literature
MST3155H	Middle French Literature
MST3159H	Classical Antiquity in the French Middle Ages
MST3160H	Introduction to Romance Philology: From Vulgar Latin to the First Literary Texts
MST3163H	Medieval French Historiography
MST3164H	Medieval French Romance: The Grail
MST3205H	Violence in Medieval Society
MST3207H	Decretists and Decretalists: Canonical Jurisprudence 1140–1300
MST3225H	Jews and Christians in Medieval and Renaissance Europe
MST3226H	Medieval Mediterranean History
MST3231H	Clio's Workshop: Introduction to Historical Methods
MST3232H	Vernacular Literature in Medieval Europe: Status and Function
MST3235H	Communal Florence, 1150–1530
MST3237H	Monastic Rules and Customaries
MST3241H	Everyday Life in Medieval Europe
MST3242H	Carolingian Europe 750–900 CE
MST3244H	Saints of Early Medieval Italy
MST3251H	The Merovingians
MST3253H	Medieval Sicily
MST3261H	Cluny in the Central Middle Ages
MST3263H	Gender and Sexuality in Medieval Literature
MST3301H	Themes in Medieval Philosophy
MST3309H	Birth of the Will: Augustine and Anselm
MST3310H	Thomas Aquinas
MST3311H	Topics in Medieval Metaphysics
MST3321H	Philosophy of Mind in the Middle Ages
MST3322H	William of Ockham
MST3327H	Free Will and Human Action in Medieval Philosophy
MST3346H	Medieval Islamic Philosophy
MST3347H	Late Antique and Early Medieval Philosophical Commentators
MST3501H	Introduction to the Medieval Christian Liturgy
MST3601H	Medieval Spanish Sources in Context
MST3602H	Crime and Punishment in the Middle Ages
MST3603H	Society and Literary Texts in Medieval Spain
MST3604H	The Culture of Food, Cooking, and Diet Through Daily Life and Tradition in Medieval Europe
MST3606H	Historical Archives in the Digital Age: Books Along the Silk Roads
MST5001H	Topics in Medieval Art History
MST5002H	Topics in Medieval History
MST5003H	Topics in Medieval Languages and Literatures
MST5004H	Topics in Medieval Manuscript Studies and Textual Cultures
MST5005H	Topics in Medieval Musicology
MST5006H	Topics in Medieval Religion and Theology
MST9310H	Directed Reading
MST9310Y	Directed Reading
MST9315H	Directed Reading

Near and Middle Eastern Civilizations

Course Code	Course Title
NMC2221H	Persian Mirrors for Princes
NMC2226H	Medieval Persian Historiography and Diplomatics

Slavic Languages and Literatures

Course Code	Course Title
SLA1104H	Introduction to Old Church Slavonic
SLA1109H	Studies in Old Church Slavonic

Molecular Genetics

Molecular Genetics: Introduction

Faculty Affiliation

Medicine

Degree Programs

Genetic Counselling

MSc

Medical Genomics

MHSc

Molecular Genetics

MSc and PhD

Combined Degree Programs

MD / PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Developmental Biology**
  - Molecular Genetics, MSc, PhD
- **Genome Biology and Bioinformatics**
  - Molecular Genetics, PhD
- **Next-Generation Precision Medicine**
  - Molecular Genetics, PhD

Overview

The Department of Molecular Genetics is administered from the Medical Sciences Building and has nearly 100 faculty members whose labs are located within the Medical Sciences Building, the MaRS Centre, the Donnelly Centre, the Hospital for Sick Children, Mount Sinai Hospital, and the Ontario Institute for Cancer Research.

Faculty members run a variety of research programs in diverse areas such as genetic models of development and disease; molecular medicine and human genetics; cellular and molecular structure and function; molecular microbiology and infectious disease; computational and systems biology; functional genomics and proteomics.

Contact and Address

Web: www.moleculargenetics.utoronto.ca
Email: mgy.info@utoronto.ca
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Fax: (416) 978-6885

Department of Molecular Genetics
University of Toronto
Medical Sciences Building
Room 4398, 1 King's College Circle
Toronto, Ontario M5S 1A8 Canada

Molecular Genetics: Graduate Faculty

Full Members

Abelson, Sagi - PhD
Andrews, Brenda Jean - BSc, PhD
Andrulis, Irene - BA, PhD
Babaian, Artem - PhD
Bader, Gary - BSc, PhD
Blencowe, Benjamin - BSc, PhD
Boone, Charlie - BSc, PhD
Boulianne, Gabrielle - BSc, PhD
Brill, Julie - PhD
Brown, Martha - BSc, MSc, PhD
Campbell, Kieran - PhD
Ciruna, Brian - BSc, PhD
Claycomb, Julie - BS, BA, PhD
Cochrane, Alan - BSc, PhD
Collins, Rick - BSc, PhD
Cordes, Sabine - BS, PhD
Cowen, Leah - BSc, PhD
Culotti, Joseph - PhD
Davidson, Alan Richard - BSc, PhD
Delgado Olguin, Paul - BSc, PhD
Dennis, James - PhD
Derry, Brent - BSc, MSc, PhD
Deshwar, Ashish R. - MD
Dick, John - PhD
Dirks, Peter Benjamin - MD, PhD
Dowling, James - MD
Durocher, Daniel - PhD
Edwards, Aled - BSc, PhD
Egan, Sean - PhD ***(Associate Graduate Coordinator)***
Ellis, James - PhD
Ernst, Oliver - PhD
Frappier, Lori - PhD ***(Graduate Coordinator)***
Fraser, Andrew - BSc
Gallie, Brenda - MD
Gillis, Jesse - BSc, MSc, PhD
Gingras, Anne-Claude - BSc, PhD
Goeva, Aleksandrina - MS, ScD, SM, PhD
Gray-Owen, Scott - BS, PhD
Greenblatt, Jack - BSc, PhD
Hayes, Madeline - PhD
Hughes, Timothy - BMus, BSE, PhD ***(Chair and Graduate Chair)***
Hui, Chi-Chung - PhD

Ivakine, Evgueni (Zhenya) - MSc, MSc, PhD
Jackson, Hartland - PhD
Joshi-Sukhwal, Sadhna - BSc, MSc, DSc, PhD
Kafri, Ran - BSc, MSc, PhD
Kaplan, David - BA, PhD
Kay, Lewis - PhD
Kim, Tae-Hee - PhD
Krause, Henry - BSc, PhD
Lavoie, Brigitte - PhD
Lefebvre, Julie - PhD
Lipshitz, Howard - PhD
Liu, Jun - PhD
Meneghini, Marc - BSc, PhD
Miller, Freda - BSc, PhD
Moffat, Jason - BSc, PhD
Moran, Michael - BSc, PhD
Morris, John - BS, PhD
Morris, Quaid - BS, PhD
Navarre, William - BSc, PhD
Okamoto, Kenichi - BS, MA, PhD
Park, Jeehye - PhD
Parkinson, John - BS, PhD
Pearson, Christopher - PhD
Pelletier, Laurence - BSc, MSc, PhD
Reimand, Juri - MSc, PhD
Reinke, Aaron - PhD
Rini, James - BSc, PhD
Rommens, Johanna - BSc, PhD
Rost, Hannes - PhD
Roth, Frederick - PhD
Roy, Peter John - BSc, PhD
Rozen-Gagnon, Kathryn - BA
Scherer, Stephen - PhD
Scott, Ian - BSc, PhD
Segall, Jacqueline - BSc, PhD
Sicheri, Frank - BSc, PhD
Smibert, Craig - BSc, PhD
Sondheimer, Neal John - MD, PhD
Spence, Andrew - BSc, PhD
Stagljar, Igor - BS, PhD
Stein, Lincoln - BA, MD, PhD
Steipe, Boris - MD, PhD
Taipale, Mikko - PhD
Tsukahara, Tatsuya - PhD
Tyers, Michael - PhD
Van Der Kooy, Derek - BSc, MA, PhD
Wang, Shu - ScD
Wilde, Andrew Rhys - BSc, PhD
Wrana, Jeff - PhD
Youn, Ji-Young - PhD
Yuen, Ryan - PhD
Zhang, Zhaolei - BS, PhD
Zhen, Mei - PhD
Zhu, Shankuan - PhD
Zhulyn, Olena - PhD

Members Emeriti

Aubin, Jane - BSc, PhD
Becker, Andrew - MD, PhD
Bernstein, Alan - MD
Carver, Jeremy - BA, PhD
Funnell, Barbara - PhD
Rossant, Janet - PhD
Sadowski, Paul - MD, PhD

Associate Members

Afonso, Samantha - MSc
Amburgey, Kimberly - MSc
Aronson, Melyssa - BS, MS
Babul-Hirji, Riyana - BSc, MSc
Care, Melanie - BSc, MSc
Carnevale, Amanda - MSc
Carroll, Johanna - BA, PhD
Chitayat, David - MD
Cytrynbaum, Cheryl - MSc
Druker, Harriet - MSc
Dupuis, Lucie - MSc
Flamenbaum, Kayla - MSc
Fung, Charlotte - MSc
Gallinger, Bailey - MSc
Gojska, Nicole - MSc
Graham, Tracy - MSc
Hewson, Stacy - MSc
Hill, Jessica - BSc, MSc, PhD
Hoang, Ny - MSc
Inglese, Cara - MSc
Johnstone, Brittney - MSc
Kaiser, Amy - BA
Klatt, Regan - BSc, MSc
Langlois, David J. - BA, MA, PhD
Lemmens, Trudo - LLM, DCL, Dr. William M. Scholl Chair in Health Law and Policy
Liston, Eriskay - BA, MSc
Lorentz, Justin - MSc
MacDonald, Heather - MSc
Martin, Nicole - BSc, MS
McCuaig, Jeanna - MS
Mendoza, Roberto - MD
Miller, Kristen - MSc
Murphy, Jillian - BSc, MSc
Myles Reid, Diane - BSc, MSc
Nguyen, Long - MD
Panchal, Seema - BSc, MSc
Peck, Larissa - MSc
Quercia, Nada - BS, MSc
Robertson, Carleigh - MSc
Semotiuk, Kara - BSc
Shugar, Andrea - BSc, MS
Shuman, Cheryl - MSc
Silver, Joshua - BSc, MSc
Silver, Rachel - BSc, MSc
Steele, Leslie - BSc, MSc
Steiner, Martina - PhD
Styles, Erin - BSc, PhD
Szego, Michael - BSc, MHSc, PhD
Szuto, Anna - MSc
Szybowska, Marta - MSc
Tam, Karen - BSc, MSc
Thain, Emily - MSc
Uster, Tamarah - BSc, MS
Volenik, Alexandra - MSc
Waldman, Larissa - MSc
Watkins, Nicholas - MSc
Weksberg, Rosanna - MD, PhD
Yoon, Grace - MD
Zahavich, Laura - MSc

Molecular Genetics: Genetic Counselling MSc

The **Master of Science (MSc) program** is a full-time degree program (non-thesis) that prepares students with academic knowledge and clinical skills so that upon graduating, they may work as highly competent genetic counsellors in a variety of practice settings. Genetic counsellors are employed in many areas of healthcare, providing genetic assessment and counselling to individuals and families with, or at risk for, a genetic disorder. There is also an increasing demand for genetic counsellors to join genetic/genomic testing laboratories, industry, public health settings, etc. Genetic counsellors are often involved in academic activities including teaching and research, administrative leadership roles, advisory roles for government and/or support organizations, and other precision medicine leadership capacities. This program is accredited by the Accreditation Council for Genetic Counseling.

MSc Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Molecular Genetics' additional admission requirements stated below.
- A four-year undergraduate degree from a recognized university with a minimum B+ average, both cumulatively and in the upper years.
- Successful completion or proof of current enrolment of undergraduate courses at a recognized university in biology, molecular biology/genetics, biochemistry, embryology/animal developmental biology, statistics, and psychology.
- The development of strong interpersonal and communication skills, as evidenced by experience in a counselling setting (volunteer or paid).
- All applicants must register with the National Matching System (NMS); instructions are provided in the department's application procedures.

Completion Requirements

- Students must complete **13.0 full-course equivalents (FCEs)** as follows:
  - 10.0 FCEs in coursework with a minimum B– standing. Lectures, meetings, and rounds must be attended at a minimum of 90% of scheduled occurrences.
    - MSC2010Y *Molecular Medicine in Human Genetic Disease*
    - MMG1120Y *Clinical Rotations I*
    - MMG1122Y *Issues in Genetic Counselling I*
    - MMG1124Y *Principles of Effective Counselling*
    - MMG1126Y *Clinical Issues in Pregnancy and Child Development*
    - MMG1128Y *Risk Calculation and Research Methodology*
    - MMG1130Y *Tutorial in Molecular Genetics*
    - MMG1132H *Laboratory Skills*
    - MMG1220Y *Clinical Rotations II*
    - MMG1222Y *Issues in Genetic Counselling II*
    - MMG1224Y *Advanced Principles of Effective Counselling*
    - MMG1226Y *Concepts in Clinical Genetics*
    - MMG1228Y *Independent Research Project*
    - MMG1230H *Cancer Genetic Counselling*.
  - 1.0 FCE independent research project. Students are expected to develop and implement a research study designed and carried out by them under the supervision of a faculty member. The independent research project must be relevant to the field of genetic counselling and/or clinical genetics. Students must present the independent research project both orally and in a written format suitable for publication.
  - 2.0 FCEs in clinical practicums.
- Students spend a minimum of 21 months over a two-year period in full-time attendance.
- Students are required to complete an intervening summer rotation (six weeks duration).

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Molecular Genetics: Medical Genomics MHSc

The professional **Master of Health Science (MHSc) program** in Medical Genomics is a fast-paced, content-dense degree program delivered over five continuous sessions. This program will provide medical trainees, clinicians, research scientists, and laboratory professionals with the theory and practical knowledge necessary to incorporate the generation, analysis, and interpretation of genomics data into research and medical practice. Preferred applicants have relevant research and/or clinical experience and can demonstrate an immediate and substantive use of this degree in professional practice.

MHSc Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Molecular Genetics' additional admission requirements stated below.
- An appropriate BSc degree with high academic standing from a recognized university, with a B+ average or better. Applicants would normally possess an undergraduate degree displaying competence in genetics, molecular biology, or related fields.
  or
- An appropriate MD degree with high academic standing from a recognized university, with a B+ average or better.
- Applicants will complete an application package including:
  - all previous university transcripts

    - a transcript summary form for either the clinical or laboratory stream
    - curriculum vitae (CV)
    - statement of interest (one to two pages maximum), including how this program will have an impact on future career path
    - three letters of reference from professional, academic, or other qualified referees.
- Interview (15 minutes).

Completion Requirements

Students must complete a total of **9.0 full-course equivalents (FCEs)** as follows:

- Year 1:
    - MMG3001Y *Advanced Human Genetics* (Fall and Winter)
    - MMG3002Y *Biological Statistics* (Fall)
    - MMG3003Y *Genomics Methodologies* (Winter and Summer).
- Year 2:
    - MMG3004Y *Communication of Genetic Information* (Fall)
    - MMG3005Y *Ethical and Legal Implications of Genomics* (Fall)
    - MMG3007Y *Clinical Practicum in Medical Genomics*, an elective for clinical-stream students and trainees in patient-facing medical fields (Winter)
      or
      MMG3008Y *Practicum in Modern Genomics*, an elective for laboratory professional-stream students in clinical/research science careers (Winter).
- Four elective modular courses from the following list (1.0 FCE):
    - MMG3201H *Medical Genomics Graduate Professional Development* (Summer)
    - MMG3202H *Next-Generation Sequencing — Data Generation Laboratory* (Summer)
    - MMG3203H *Next-Generation Sequencing — Data Analysis and Interpretation* (Summer)
    - MMG3204H *Practical Applications of Genome Interpretation* (Fall)
    - MMG3205H *Research Topics in Medical Genomics* (Fall).

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW)
Time Limit: 3 years full-time

Molecular Genetics: Molecular Genetics MSc

The **Master of Science (MSc) program** offers research training in a broad range of genetic systems from bacteria and viruses to humans. Research projects include DNA repair, recombination and segregation, transcription, RNA splicing and catalysis, regulation of gene expression, signal transduction, interactions of host cells with bacteria and viruses, developmental genetics of simple organisms (worms and fruit flies) as well as complex organisms (mice), molecular neurobiology, molecular immunology, cancer biology and virology, structural biology, and human genetics and gene therapy.

Students may only start this program in September.

MSc Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Molecular Genetics' additional admission requirements stated below.
- Normally, a BSc or MD degree or equivalent with excellent academic credentials in molecular biology, genetics, microbiology, and/or biochemistry. Applicants trained in other quantitative sciences (math, physics, chemistry, computer science, engineering, etc.) are also strongly encouraged to apply.

Completion Requirements

- **Coursework.** Successful completion of **1.5 full-course equivalents (FCEs)** as follows:
    - MMG1001H *Foundational Genetic Approaches I*.
    - MMG1003H *First Year Colloquium*.
    - MMG1004H *A Practical Course in Programming for Biologists*.
    - MMG1113H *MSc Presentation Skills*.
    - MMG1114H *MSc Presentation*.
- Students must also attend each of the following graduate seminars two times:
    - MMG1111H *Graduate Seminars I*.
    - MMG1112H *Graduate Seminars II*.
- A **thesis** on a research project.
- Defence of the thesis at an **oral examination**.
- **Residency.** Students are required to spend 12 months in full-time attendance.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Molecular Genetics: Molecular Genetics PhD

The **Doctor of Philosophy (PhD)** program offers research training in a broad range of genetic systems from bacteria and viruses to humans. Research projects include DNA repair, recombination and segregation, transcription, RNA splicing and catalysis, regulation of gene expression, signal transduction, interactions of host cells with bacteria and viruses, developmental genetics of simple organisms (worms and fruit flies) as well as complex organisms (mice), molecular neurobiology, molecular immunology, cancer biology and virology, structural biology, and human genetics and gene therapy.

Applicants may enter the PhD program via one of three routes: 1) following completion of an MSc degree; 2) transfer from the University of Toronto MSc program; or 3) direct entry following completion of a BSc, MD, or equivalent degree.

Students may only start this program in September.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Molecular Genetics' additional admission requirements stated below.
- An MSc degree in Molecular Genetics, or equivalent, from the University of Toronto or another recognized university. As a condition of admission, applicants who have completed their MSc outside of the Department of Molecular Genetics may be required to complete additional course requirements.
- Normally, an MSc degree or equivalent with wet or dry lab experience related to molecular biology, genetics, microbiology, and/or biochemistry is required. Applicants trained in other quantitative sciences (math, physics, chemistry, computer science, engineering, etc.) are also strongly encouraged to apply.
- Attainment of minimum admission standards does not guarantee acceptance into the PhD program.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **1.0 full-course equivalent (FCEs)** as follows:
  - MMG1115H *PhD Presentation*.
  - Two modular courses (0.25 FCE each), which must be taken after successfully completing the qualifying examination prior to the Summer session of Year 4. If a program extension is granted beyond Year 4, students have until the Summer session of Year 5 to complete.
- Students must also attend each of the following graduate seminars four times:
  - MMG1111H *Graduate Seminars I*.
  - MMG1112H *Graduate Seminars II*.
- A **thesis** on a research project.
- Successful completion of a **qualification examination** in Year 2. The qualifying exam consists of the submission of a **written proposal and an oral examination**. If a student is unsuccessful at the first attempt at the qualifying exam, there are three possible outcomes:
  - The student may retake the oral exam within four to eight weeks without revision of the written proposal; or
  - The student may submit a revised written proposal and retake the oral exam within four to eight weeks; or
  - The student may withdraw from the program after consultation with the Graduate Coordinator. In cases where the student does not have an MSc in Molecular Genetics, the Exam Committee may recommend the student reclassify into the MSc program.
- **Residency.** Students who enter the doctoral program after completing a master's program must spend a minimum of two sessions in full-time attendance.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- Transfer applicants must be enrolled in the Department of Molecular Genetics MSc program.
- Students must have successfully completed the following:
  - MMG1001H *Foundational Genetic Approaches I*.
  - MMG1003H *First Year Colloquium*.
  - MMG1004H *A Practical Course in Programming for Biologists*.
  - MMG1113H *MSc Presentation Skills*.
  - MMG1114H *MSc Presentation*.
- Students must be enrolled in MMG1111H and MMG1112H in order to qualify to transfer to the PhD program.
- Transfer applicants must successfully complete a reclassification transfer exam within the first 24 months of registration in the MSc program.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **1.0 full-course equivalent (FCE)** as follows:
  - MMG1115H *PhD Presentation*.
  - Two modular courses (0.25 FCE each), which must be taken after successfully completing the transfer examination and prior to the Summer session of Year 5.
- Students must also attend any remaining graduate seminar sessions not completed prior to transferring. Students must attend each graduate seminar four times:
  - MMG1111H *Graduate Seminars I*.
  - MMG1112H *Graduate Seminars II*.
- A **thesis** on a research project.
- Successful completion of a **transfer examination** in Year 2. The transfer exam consists of the submission of **a written proposal and an oral examination**. If a student is unsuccessful at the first attempt at the transfer exam, there are four possible outcomes:
  - The student may retake the oral exam within four to eight weeks without revision of the written proposal; or
  - The student may submit a revised written proposal and retake the oral exam within four to eight weeks; or
  - The student is asked to complete and defend an MSc thesis; or
  - The student may withdraw from the program after consultation with the Graduate Coordinator.
- **Residency.** Students who enter the doctoral program after completing a master's program must spend a minimum of two sessions in full-time attendance.

Mode of Delivery: In person

Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Molecular Genetics' additional admission requirements stated below.
- Students with a BSc degree, an MD degree, or equivalent may be accepted directly into the PhD program.
- Normally, a BSc degree or equivalent with academic credentials and wet or dry lab experience related to molecular biology, genetics, microbiology, and/or biochemistry is required. Applicants trained in other quantitative sciences (math, physics, chemistry, computer science, engineering, etc.) are also strongly encouraged to apply.
- Attainment of minimum admission standards does not guarantee acceptance into the PhD program.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **2.5 full-course equivalents (FCEs)** as follows:
  - MMG1001H *Foundational Genetic Approaches I*.
  - MMG1003H *First Year Colloquium*.
  - MMG1004H *A Practical Course in Programming for Biologists*.
  - MMG1113H *MSc Presentation Skills*.
  - MMG1114H *MSc Presentation*.
  - MMG1115H *PhD Presentation*.
  - Two modular courses (0.25 FCE each), which must be taken after successfully completing the qualifying examination and prior to the Summer session of Year 5.
- Students must also attend each of the following graduate seminars four times:
  - MMG1111H *Graduate Seminars I*.
  - MMG1112H *Graduate Seminars II*.
- A **thesis** on a research project.
- Successful completion of a **qualification examination** in Year 2. The qualifying exam consists of the submission of **a written proposal and an oral examination**. If a student is unsuccessful at the first attempt at the qualifying exam, there are four possible outcomes:
  - The student may retake the oral exam within four to eight weeks without revision of the written proposal; or
  - The student may submit a revised written proposal and retake the oral exam within four to eight weeks; or
  - The student may choose to reclassify in the MSc program; or
  - The student may withdraw from the program after consultation with the Graduate Coordinator.
- **Residency.** Students who enter the doctoral program after completing a master's program must spend a minimum of two sessions in full-time attendance.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Molecular Genetics: Genetic Counselling MSc Courses

Required Courses

Course Code	Course Title
MSC2010Y	Molecular Medicine in Human Genetic Disease
MMG1120Y	Clinical Rotations I
MMG1122Y	Issues in Genetic Counselling I
MMG1124Y	Principles of Effective Counselling
MMG1126Y	Clinical Issues in Pregnancy and Child Development
MMG1128Y	Risk Calculation and Research Methodology
MMG1130Y	Tutorial in Molecular Genetics
MMG1132H	Laboratory Skills
MMG1220Y	Clinical Rotations II
MMG1222Y	Issues in Genetic Counselling II
MMG1224Y	Advanced Principles of Effective Counselling
MMG1226Y	Concepts in Clinical Genetics
MMG1228Y	Independent Research Project
MMG1230H	Cancer Genetic Counselling

Molecular Genetics: Medical Genomics MHSc Courses

Required Courses

Course Code	Course Title
MMG3001Y	Advanced Human Genetics
MMG3002Y	Biological Statistics
MMG3003Y	Genomics Methodologies
MMG3004Y	Communication of Genetic Information
MMG3005Y	Ethical and Legal Implications of Genomics

Required Elective (choose one)

Course Code	Course Title
MMG3007Y	Clinical Practicum in Medical Genomics
MMG3008Y	Practicum in Modern Genomics

Modular Courses (choose any four, 0.25 FCE each)

Course Code	Course Title
MMG3201H	Medical Genomics Graduate Professional Development
MMG3202H	Next-Generation Sequencing — Data Generation Laboratory
MMG3203H	Next-Generation Sequencing — Data Analysis and Interpretation
MMG3204H	Practical Applications of Genome Interpretation
MMG3205H	Research Topics in Medical Genomics

Molecular Genetics: Molecular Genetics MSc, PhD Courses

Course Code	Course Title
JBB1425H	Structural Biology: Principles and Practice
JBB2025H	Protein Crystallography
JDB1024Y	Topics in Developmental Biology
JDB1025H	Developmental Biology
JDB1026Y	Student Seminars in Developmental Biology
MMG1001H	Foundational Genetic Approaches I
MMG1003H	First Year Colloquium
MMG1004H	A Practical Course in Programming for Biologists
MMG1111H	Graduate Seminars I
MMG1112H	Graduate Seminars II
MMG1113H	MSc Presentation Skills
MMG1114H	MSc Presentation
MMG1115H	PhD Presentation
MMG1199H	Directed Reading and Research Course
MMG1301H	Developmental Neurobiology
MMG1302H	Advanced Imaging: Techniques and Application in Biological Systems
MMG1303H	Cell Cycle and Growth Control
MMG1304H	Bacterial Pathogens
MMG1305H	Comparative and Population Genomics
MMG1306H	Epigenetics and Transcriptional Control
MMG1307H	Fungal Drug Resistance, Development, and Disease
MMG1308H	Human Genome Analysis
MMG1309H	Virus Host Interactions
MMG1315H	Gene and Protein Evolution
MMG1316H	Cancer Genetics
MMG1317H	Special Topics in Advanced Cancer Proteomics
MMG1318H	Cytoskeletal Dynamics
MMG1319H	Genomics of Infectious Diseases
MMG1320H	Genome Duplication, Repair, and Transmission
MMG1321H	Eukaryotic Signaling
MMG1322H	Protozoan Pathogens
MMG1323H	Signalling Networks in Development, Regeneration, and Disease
MMG1324H	Mitochondrial Genetics in Health and Disease
MMG1325H	Molecular Mechanisms of Mood and Mind (M4)
MMG1326H	Post-Transcriptional Regulatory Mechanisms
MMG1327H	Microbiomes in Health and Disease
MMG1331H	Stem Cells II
MMG1333H	Virus Replication
MMG1344H	Foundational Computational Biology I
MMG1345H	Foundational Computational Biology II
MMG1425H	Signal Transduction and Cell Cycle Regulation

Music

Music: Introduction

Faculty Affiliation

Music

Degree Programs

Music

MA and PhD

- Fields:
  - Ethnomusicology;
  - Music and Health Sciences;
  - Music Education;
  - Musicology;
  - Music Theory

Music Performance

MMus

- Fields:
  - Applied Music and Health;
  - Collaborative Piano;
  - Composition;
  - Conducting;
  - Historical Performance;
  - Instrumental;
  - Jazz;
  - Music Technology and Digital Media;
  - Opera;
  - Piano Pedagogy;
  - Vocal;
  - Vocal Pedagogy

DMA

- Fields:
  - Composition;
  - Performance

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Aging, Palliative and Supportive Care Across the Life Course**
  - Music, MA, PhD
- **Book History and Print Culture**
  - Music, MA, PhD
- **Environmental Studies**
  - Music, MA, PhD
- **Environment and Health**
  - Music, MA, MMus, PhD
- **Jewish Studies**
  - Music, MA, PhD
  - Music Performance, DMA
- **Neuroscience**
  - Music, MA, PhD
- **Sexual Diversity Studies**
  - Music, MA, PhD
- **South Asian Studies**
  - Music, MA, PhD

Overview

A taught graduate degree program at the Faculty of Music was inaugurated in 1954. The Faculty of Music currently offers graduate degrees in 17 areas of concentration and fosters the institutional alliance of all areas of advanced music study. Graduate degrees are offered at both master's and doctoral levels in areas such as composition, ethnomusicology, music education, musicology, and performance. Graduates from all areas of the program occupy leading positions in music departments across Canada and around the world.

Contact and Address

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Graduate Department of Music
University of Toronto
Edward Johnson Building
80 Queen's Park Crescent
Toronto, Ontario M5S 2C5 Canada

Music: Graduate Faculty

Full Members

Albano, Michael - BA,
Bartel, Lee - BA, BMus, MEd, PhD
Bowen, William - BA, BMus, MA, PhD
Britton, Eliot - PhD
Clark, Caryl - BMus, MA, PhD
Crow, Jonathan - BMus
Degli Esposti Elisi, Enrico Elisi - DMA
Dolloff, Lori Anne - MusB, PhD
Edwards, Darryl - BEd, BMus, MMus, DMA
Elliott, Robin - BMus, MA, PhD ***(Associate Dean, Graduate Education)***
Gutsche-Miller, Sarah - PhD
Haines, John - BSc, BA, MA, PhD
Halladay, Wallace - BM
Hatzis, Christos - MusM, PhD

Hemmasi, Farzaneh - PhD
Hisama, Ellie - PhD
Horst, Sandra - BMus, MM
Huang, Aiyun - DMA
Koga, Midori - BMus, AA, MMus, DMA
Komisaruk, Kevin - BMus, MMus, MusDoc
Kulesha, Gary - AA, ARCT, ARCT
Lee, Sherry - BMus, MMus, PhD
Lockhart, Ellen - PhD
Macdonald, Lorna - BME, MMus
MacKay, Gillian - BMus, MMus, DMA
McClelland, Ryan - BMus, MM, PhD ***(Interim Dean)***
McFadden, Jeffrey - BMus, MusM, MusDoc ***(Associate Dean, Performance and Public Events)***
Niknafs, Nasim - PhD ***(Associate Dean, Research)***
Packman, Jeff - BS, MA, PhD
Palej, Norbert - BM, MM, DMA
Parker, James - BMus, MM, DMA, ARCT
Patipatanakoon, Annalee - BAMus
Philcox, Steven - BM, MM
Pilzer, Joshua David - BA, MA, PhD
Promane, Terry - BM
Risk, Laura Jenny - BA, MA, PhD
Rolston, Shauna - BA, MM
Sallmen, Mark - BM, MA, PhD
Sanger-Kippen, Annette Edith - BAMus, PhD
Suzuki, Kotoka - BM, MusD
Tan, Daphne - PhD ***(Associate Dean, Academic and Student Affairs)***
Taylor, Daniel - MM
Thaut, Corene - PhD
Thaut, Michael - PhD
Vande Moortele, Steven - PhD

Members Emeriti

Aide, William - BSc
Apfelstadt, Hilary - PhD
Beach, David - BA, MusM, PhD
Chan, Ka Nin - BASc, BMus, MMus, MusD
Gould, Elizabeth - BM, MA, MusDoc
Hartenberger, J. Russell - MB, MM, PhD
Johnston, Gregory - MusB, MA, PhD
Kippen, James - BA, PhD
McLean, Don - PhD
Murley, Mike - BFA
Parker, Mary Ann - BA, MM, PhD, ARCT
Patrick, Dennis - MusBac, MMus
Rapoport, Alexander - MMus, MusDoc
Walter, Cameron - BMus, MMus, EdD

Associate Members

Braun, Russell - BMus
Brownell, John - BFA, MMus, MusD
Clements-Cortes, Amy - PhD
Gonzalez Ben, Antia - PhD
Guptill, Christine Anna - PhD
Hennigar, Harcus - BMus, BA
Hetherington, David - BA, ARCT
Jasavala, John - MM
John, Bina - BM, BE, MM, MusD
Johnson, Joseph - MMus
Kuzmenko, Larysa - BMus, MM
Lewis, Jim - MM
McDonagh, Brian - BM
Nediger, Charlotte - MMus
Newsome, Gregory Lee - MMus
Nielsen, Wendy - BMus, MM
Paulin, Nathalie - MMus
Sanborn, Chase - MA
Sicsic, Nancy - MMus
Sumner, Carolyne - PhD
Watts, Camille - BMus
Whicher, Monica - BMus
Wong, Lydia - BMus
Ying, Timothy - DMA

Music: Music MA; Field: Ethnomusicology

MA Program; Field: Ethnomusicology

Minimum Admission Requirements

- Applicants to the MA in Music, Ethnomusicology field are accepted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- An appropriate Bachelor of Arts specialist degree or Bachelor of Music degree from a recognized university, with an average standing equivalent to a University of Toronto mid-B or better over the final two years.
- Applicants whose undergraduate degrees do not meet this standard may be required to take up to a full year of prerequisite courses.
- Applicants must submit an essay representative of their work in music history or ethnomusicology.
- Two letters of reference commenting on the applicant's academic ability and promise.

Completion Requirements

- **Coursework.** Students must complete **6.0 full-course equivalents (FCEs)** as follows:
  - MUS1000H *Introduction to Music Research I* in Year 1
  - MUS1002H *Fieldwork Methods and Practicum*, offered in alternate years
  - 3.5 of the 6.0 FCEs must be in the discipline; this includes MUS1000H
  - Up to 1.0 FCE may be taken outside of Musicology, Ethnomusicology, or Music Theory (either in the Graduate Department of Music or another graduate unit) with approval of the course and program advising committee.
  - The primary means of evaluating quality are research essays and seminar presentations. MUS1990H *MA Major Paper or Project* is optional.
- A course and program advising (CPA) committee will review course selections. The CPA committee will ensure course selections meet the program requirements and are appropriate to the field.
- Students must maintain a **minimum average of A–** in Year 1 of the program in order to progress to Year 2.

- **One language** other than English is required: this should be relevant to a student's musical and scholarly interests. The chosen language must be approved by the department. Students are strongly encouraged to complete the language requirement in Year 1.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Music: Music MA; Field: Music and Health Sciences

MA Program; Field: Music and Health Sciences

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- A Bachelor of Music or Bachelor of Music Therapy degree with an average standing of mid-B or better over the final two years, or an equivalent program and standing from another recognized university. Applicants who have taken courses in music therapy, psychology, kinesiology, and/or rehabilitation science are preferred. Applicants whose undergraduate degree does not meet this standard may be required to take appropriate prerequisite courses.
- Selected applicants will be scheduled for an interview. Depending on circumstances, an assigned essay may be substituted for the interview with faculty approval.
- Two letters of reference commenting on the applicant's professional experience and academic ability.

Completion Requirements

- Coursework. Students must complete 4.0 full-course equivalents [FCEs] as follows:
  - Required courses (3.0 FCEs)
    - One of the following quantitative methods research courses (0.5 FCE), approved by the advisor:
      - CHL5201H *Biostatistics I*
      - JOI1287H *Introduction to Applied Statistics*
      - NUR1075H *Introductory Statistics for Health Sciences Research*
      - REH1120H *Research Methods for Rehabilitation*
    - MUS7110H *Neurosciences of Music: Scientific Foundations, Clinical Translations*
    - MUS7412H *Elementary Improvisation Methods*
    - Three of the following courses (1.5 FCEs) or other course(s) as approved by the department:
      - MUS4248H *Optimizing the Singing Mind*
      - MUS4613H *Performance Techniques for Hospice Palliative Care*
      - MUS7400H *Introduction to Music and Health Care*
      - MUS7406H *Music Psychology*
    - MUS7407H *Clinical Research Practicum*
    - MUS7415H *Topics in Music and Health I*
    - MUS7416H *Topics in Music and Health II*
  - Elective courses (1.0 FCE) from health-related music courses or from health-related departments as approved by the advisor. Students may choose to enrol in a recommended collaborative specialization during their study, such as the Collaborative Specialization in Aging, Palliative and Supportive Care Across the Life Course or the Collaborative Specialization in Neuroscience. The course(s) taken as part of the collaborative specialization may count towards this elective requirement.
- All students are assigned a faculty advisor.
- Students must pass, by the end of Year 1, a **comprehensive examination** (oral) in music and health, based on four selected essays representing a cohesive research direction. Two attempts to complete the exam are permitted. If the second attempt is unsuccessful, the department will recommend termination of the student's program.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

Music: Music MA; Field: Music Education

MA Program; Field: Music Education

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- Bachelor of Music degree in Music Education from the University of Toronto with an average standing of mid-B or better over the final two years, or an equivalent program and standing from another recognized university. Applicants whose undergraduate degree does not meet this standard may be required to take appropriate prerequisite courses.
- Applicants will normally have two years of teaching experience, although this requirement may be waived at the discretion of the department.
- An interview with the Music Education faculty must be scheduled whenever possible. With faculty approval, an assigned essay may be substituted for the interview.
- Two letters of reference commenting on the applicant's teaching experience, music performance ability, and academic ability.

Completion Requirements

- **Coursework.** Students must complete **4.0 full-course equivalents (FCEs)** as follows:
  - A minimum of 2.5 FCEs in Music Education, including MUS2111H *Introduction to Research in Music Education* and MUS2151H *Philosophy and Music Education*.
  - Elective courses may be chosen from the MA/PhD/MMus/DMA courses of instruction and/or other graduate courses available in the University, subject to the approval of the department.
  - A major essay (MUS2990Y) may be substituted for 1.0 FCE with the approval of the department.
- Pass a **comprehensive examination** in music education (written and oral). Students must successfully complete the comprehensive exam by the end of Year 1. Students are permitted two attempts to complete the exam. If students are unsuccessful in their second attempt at the comprehensive exam, the department will make a recommendation for program termination.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Music: Music MA; Field: Musicology

MA Program; Field: Musicology

Minimum Admission Requirements

- Applicants to the MA in Music, Musicology field are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- An appropriate Bachelor of Arts specialist degree or Bachelor of Music degree from a recognized university, with an average standing equivalent to a University of Toronto mid-B or better over the final two years. Applicants whose undergraduate degrees do not meet this standard may be required to take up to a full year of prerequisite courses.
- Applicants must submit an essay representative of their work in music history.
- Two letters of reference commenting on the applicant's academic ability and promise.

Completion Requirements

- **Coursework.** Students must complete **6.0 full-course equivalents (FCEs)** as follows:
  - MUS1000H *Introduction to Music Research I* in Year 1.
  - 3.0 of the 6.0 FCEs must be in the discipline; this includes MUS1000H.
  - Up to 1.0 FCE may be taken outside of Musicology, Ethnomusicology, or Music Theory (either in the Graduate Department of Music or another graduate unit) with approval of the course and program advising (CPA) committee.
  - The primary means of evaluating quality are research essays and seminar presentations. MUS1990H *MA Major Paper or Project* is optional.
  - A CPA committee will review course selections. The CPA committee will ensure course selections meet the program requirements and are appropriate to the field.
- **One language** other than English is required. The default language at the MA level is German. Students may petition to substitute another language if it is more relevant to their research. Petitions must be submitted to the Division Head (Musicology or Music Theory) by the end of the first session of Year 1. Information on petitioning is available at the Faculty of Music Graduate Studies Office.
  Students can fulfil the language requirement in one of the following three ways:
  - Complete GER300H at U of T or its equivalent from another university with a minimum grade of B+; or
  - Complete GER6000H; or
  - Pass a proficiency exam set by the Division.
- Students must maintain a **minimum average of A–** in Year 1 in order to progress to Year 2.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Music: Music MA; Field: Music Theory

MA Program; Field: Music Theory

Minimum Admission Requirements

- Applicants to the MA in Music, Music Theory field are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- An appropriate Bachelor of Arts specialist degree or Bachelor of Music degree from a recognized university, with an average standing equivalent to a University of Toronto mid-B or better over the final two years.
- Applicants must submit an essay that represents their work in music theory.
- Two letters of reference commenting on the applicant's academic ability and promise.

Completion Requirements

- **Coursework.** Students must complete **6.0 full-course equivalents (FCEs)** as follows:
  - MUS1000H *Introduction to Music Research* in Year 1.
  - A minimum of 3.0 FCEs in graduate courses in music theory; at least two of these (2.0 FCEs) must be graduate-only seminars.
  - Up to 1.0 FCE may be taken outside of musicology, ethnomusicology, and music theory (either in the

Graduate Department of Music or another graduate unit) with approval of the department.
    - MUS1990H *MA Major Paper or Project* (0.5 FCE) is optional.
    - A course and program advising (CPA) committee will review course selections. The CPA committee will ensure course selections meet the requirements of the program and are appropriate to the field.
- **One language** other than English is required. The default language at the MA level is German. Students may petition to substitute another language if it is more relevant to their research. Petitions must be submitted to the Division Head (Musicology or Music Theory) by the end of the first session of Year 1. Information on petitioning is available at the Faculty of Music Graduate Studies Office. Students can fulfil the language requirement in one of the following three ways:
    - Complete GER300H at U of T or its equivalent from another university with a minimum grade of B+; or
    - Complete GER6000H; or
    - Pass a proficiency exam set by the Division.
- Students must maintain a minimum average of A– in Year 1 in order to progress to Year 2.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Music: Music PhD; Field: Ethnomusicology

Applicants may enter the PhD program via one of two routes: 1) following completion of an appropriate master's degree or 2) direct entry following completion an appropriate bachelor's degree.

PhD Program; Field: Ethnomusicology

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- The PhD in Music, Ethnomusicology field is a research degree. Applicants must hold a master's degree with specialization in ethnomusicology, musicology, or music theory, but may also be in a cognate field such as anthropology or cultural studies. Applicants must have an average standing of B+ or better.
- An essay of approximately 3,000 words which demonstrates their ability to handle a research problem.
- Applicants, whether from the University of Toronto or elsewhere, may be interviewed by the department.
- Two letters of reference commenting on the applicant's academic ability and promise.

Completion Requirements

- **Coursework.** Students holding a master's degree specializing in musicology, ethnomusicology, or theory must fulfil the following requirements by the end of Year 2:
    - **3.0 full-course equivalents (FCEs)** as follows:
        - MUS1250H *PhD Seminar*, taken in the first session
        - MUS1997H *Research in Ethnomusicology*
        - 1.0 FCE in graduate-only seminars in ethnomusicology
        - 1.0 FCE in electives, of which 0.5 FCE may be taken outside of musicology, ethnomusicology, and music theory (either in the Graduate Department of Music or another graduate unit). With approval from the course and program advising (CPA) committee, one 0.5 FCE course may be deferred to the first session of Year 2.
    - Coursework should be completed during Year 1 with an **average grade of at least A–**. The exception is MUS1997H *Research in Ethnomusicology*, which lays the groundwork for the field examination and the dissertation: this course must be started at the beginning of the second session of Year 1 and completed by the end of the first session of Year 2.
    - The CPA committee will review course selections to ensure that they meet the requirements of the program and are appropriate to the field. The department may prescribe additional courses if it is felt they are necessary to develop the knowledge and skills required for a student's proposed subject of study.
- Advanced oral and reading knowledge of a **language** other than English is required: this should be relevant to a student's musical and scholarly interests. The department may also require competence in additional languages deemed necessary for a proposed area of research. Language requirements must be completed successfully by the end of Year 2.
- **Supervisor.** During Year 1, students are expected to discuss their interests, expectations, and research objectives with faculty members. An appropriate supervisor of MUS1997H must then be agreed upon. The supervisor will be primarily responsible for determining the structure and content of MUS1997H, which will include a research paper.
- A set of **three comprehensive exams** in (1) contemporary issues, (2) history of the field, and (3) repertoire, to be taken at the beginning of Year 2.
    - Students are permitted two attempts to complete each exam. A second attempt must take place at the beginning of the second session. If students are unsuccessful in their second attempt at the comprehensive exam, the department will make a recommendation for program termination.
- Students must prepare a **thesis** and will defend it at a Doctoral Final Oral Examination.
- The **residency** requirement is two years, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program; Field: Ethnomusicology (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- The PhD in Music, Ethnomusicology field is a research degree. Exceptional students may be admitted directly to the doctoral stream with an appropriate bachelor's degree (direct entry). Applicants must have an average standing of A– or better.
- An essay of approximately 3,000 words which demonstrates their ability to handle a research problem.
- Applicants, whether from the University of Toronto or elsewhere, may be interviewed by the department.
- Two letters of reference commenting on the applicant's academic ability and promise.

Completion Requirements

- **Coursework.** Students must complete **6.0 full-course equivalents (FCEs)** as follows:
  - Year 1: complete **3.0 FCEs**, exclusive of MUS1250H and MUS1997H. Students must maintain an average grade of at least A– in order to continue with the doctorate; otherwise, the student will be required to transfer into the master's program. Successful direct entry students go on to Year 2.
  - Years 2 and 3: **3.0 FCEs** as follows:
    - MUS1250H *PhD Seminar*, taken in the first session of Year 2.
    - MUS1997H *Research in Ethnomusicology* lays the groundwork for the field examination and the dissertation. This course must be started at the beginning of the second session of Year 2 and completed by the end of the first session of Year 3.
    - 1.0 FCE in graduate-only seminars in ethnomusicology.
    - 1.0 FCE in electives, of which 0.5 FCE may be taken outside of musicology, ethnomusicology, and music theory (either in the Graduate Department of Music or another graduate unit). With approval from the course and program advising (CPA) committee, one 0.5 FCE course may be deferred to the first session of Year 2.
    - All course requirements must be completed by the end of Year 3.
  - The CPA committee will review course selections to ensure that they meet the requirements of the program and are appropriate to the field. The department may prescribe additional courses if it is felt they are necessary to develop the knowledge and skills required for a student's proposed subject of study.
- Students must complete an intermediate-level **language examination** in Year 1. Advanced oral and reading knowledge of a language other than English is required: this should be relevant to the student's musical and scholarly interests. The department may also require competence in additional languages deemed necessary for a proposed area of research. Language requirements must be completed successfully by the end of Year 3.
- **Supervisor.** During Year 1, students are expected to discuss their interests, expectations, and research objectives with faculty members. An appropriate supervisor of MUS1997H must then be agreed upon. The supervisor will be primarily responsible for determining the structure and content of MUS1997H, which will include a research paper.
- A set of **three comprehensive exams** in (1) contemporary issues, (2) history of the field, and (3) repertoire, to be taken at the beginning of Year 3.
  - Students are permitted two attempts to complete each exam. A second attempt must take place at the beginning of the second session. If students are unsuccessful in their second attempt at the comprehensive exam, the department will make a recommendation for program termination.
  - Students must prepare a **thesis** and will defend it at a Doctoral Final Oral Examination.
  - The **residency** requirement is three years, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Music: Music PhD; Field: Music and Health Sciences

PhD Program; Field: Music and Health Sciences

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- Applicants must hold a four-year bachelor’s degree, either in music (or with a musical credential [e.g., ARCT]) or music therapy, plus a field-related master’s degree (e.g., master of music, master of music therapy, master’s degree in a health field such as kinesiology, neuroscience, or speech-language pathology). Applicants must have a standing of B+ or better, from the University of Toronto, or an equivalent degree and standing from another recognized university.
- An interview with Music and Health faculty members whenever possible. With faculty approval, an assigned essay may be substituted for the interview.
- Two letters of reference commenting on the applicant's professional experience and academic ability.

Completion Requirements

- **Coursework.** Students must complete **6.0 full-course equivalents (FCEs)** as follows:
  - Required courses (4.0 FCEs):
    - MUS7995Y *Music and Health Doctoral Research Project*
    - Two of the following quantitative methods research courses (1.0 FCE), approved by the advisor:
      - CHL5201H *Biostatistics I*
      - NUR1075H *Introductory Statistics for Health Sciences Research*
      - REH1120H *Research Methods for Rehabilitation*
      - JOI1287H *Introduction to Applied Statistics*
    - Four of the following courses (2.0 FCEs) or other course(s) as approved by the department:
      - MUS4248H *Optimizing the Singing Mind*
      - MUS4613H *Performance Techniques for Hospice Palliative Care*
      - MUS7110H *Neurosciences of Music: Scientific Foundations, Clinical Translations*
      - MUS7406H *Music Psychology*
      - MUS7407H *Clinical Research Practicum*
      - MUS7412H *Elementary Improvisation Methods*
      - MUS7415H *Topics in Music and Health I*
      - MUS7416H *Topics in Music and Health II*
  - Elective courses (2.0 FCEs) from the Faculty of Music or related departments as approved by the advisor. Students in the Collaborative Specialization in Aging, Palliative and Supportive Care Across the Life Course or the Collaborative Specialization in Neuroscience may use the core course(s) from the collaborative specialization for these electives.
- **Language requirements**, if any, will be established by the student's advisory committee, based on specific research needs.
- **Supervision.** As early as possible in Year 2, the student will submit a thesis proposal that must be approved by the end of that year. On approval of the proposal by the Music and Health Sciences division, a principal advisor and an advisory committee of at least three members (including the advisor as chair) will be appointed. The committee will meet with the student at least two times each academic year.
- Students must complete a **comprehensive examination** successfully by the end of Year 2. Students are permitted two attempts to complete the exam. If the second attempt is unsuccessful, the department will recommend termination of the student's program.
- **Thesis.** Upon successful completion of the field examination, the candidate proceeds to complete an oral defence of the thesis proposal, a thesis, and an oral defence of the thesis.
- Following successful completion of the comprehensive exam, a **thesis supervisory committee** is formed. The committee membership must be approved by the Academic Dean of Graduate Studies and should include at least one member from the Faculty of Music. The supervisor may be from an appropriate department. The supervisory committee must approve the thesis proposal. Thesis research involving facilities or research participants in other departments (e.g., fMRI scanning or use of hospital patients) must be approved by the Director of the Music and Health Research Collaboratory (MaHRC).
- The **residency** requirement is two years, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

Music: Music PhD; Field: Music Education

The PhD program in Music, Music Education field may be completed as a full-time program or a flexible-time program.

PhD Program; Field: Music Education

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- Applicants must hold a master's degree specializing in music education from the University of Toronto with an average standing of B+ or better, or an equivalent degree and standing from another recognized university.
- An interview with the Music Education faculty must be scheduled whenever possible.
- An assigned essay may be substituted for the interview with faculty approval.
- At the discretion of the faculty, applicants may be required to provide a videotape of their teaching expertise.
- Two letters of reference commenting on the applicant's teaching experience, music performance ability, and academic ability.

Completion Requirements

- **Coursework.** Students must complete **6.0 full-course equivalents (FCEs)** including:
  - At least 2.0 FCEs (including MUS2995Y *Music Education Doctoral Research Project*) must be taken from the departmental offerings in music education.
  - The balance of the student's required program must be approved by the department and may include courses from the MA/MMus/PhD/DMA list and/or from another graduate unit.
  - At the department's discretion, the student may receive credit for up to 3.0 FCEs from an acceptable master's degree program.
- **Language requirements**, if any, will be established by the student's advisory committee, based on specific research needs.

- **Supervision.** As early as possible in Year 2, the student will submit a thesis proposal which must be approved by the end of that year. On approval of the proposal by the Music Education division of the department, a principal advisor and an advisory committee of at least three members (including the advisor as chair) will be appointed. The committee will meet with the student at least two times each academic year.
- Students must successfully complete a **comprehensive exam** by the end of Year 2. Students are permitted two attempts to complete the exam. If students are unsuccessful in their second attempt at the comprehensive exam, the department will make a recommendation for program termination.
- **Thesis.** Upon successful completion of the comprehensive examination, the candidate proceeds to complete an oral defence of the thesis proposal, a thesis, and an oral defence of the thesis.
- The **residency** requirement is two years, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program; Field: Music Education (Flexible-Time)

Minimum Admission Requirements

- The flexible-time option is offered to practising professionals whose employment or other professional work is related to their research or study interests.
- Applicants to the flexible-time PhD program option must apply specifically to this program to be considered.
- The admission, course, and degree requirements for the flexible-time option are identical to those listed for the full-time PhD program.
- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- Applicants must hold a master's degree specializing in Music Education from the University of Toronto with an average standing of B+ or better, or an equivalent degree and standing from another recognized university.
- An interview with the Music Education faculty must be scheduled whenever possible.
- An assigned essay may be substituted for the interview with faculty approval.
- At the discretion of the faculty, applicants may be required to provide a videotape of their teaching expertise.
- Two letters of reference commenting on the applicant's teaching experience, music performance ability, and academic ability.
- Students who are considering the flexible-time PhD should ensure that they have adequate time on campus to attend classes and to fulfil the academic requirements of a PhD program.

Completion Requirements

- **Coursework.** Students must complete **6.0 full-course equivalents (FCEs)** including:
  - At least 2.0 FCEs (including MUS2995Y *Music Education Doctoral Research Project*) must be taken from the departmental offerings in music education.
  - The balance of the student's required program must be approved by the department and may include courses from the MA/MMus/PhD/DMA list and/or from another graduate unit.
  - At the department's discretion, the student may receive credit for up to 3.0 FCEs from an acceptable master's degree program.
- **Language requirements**, if any, will be established by the student's advisory committee, based on specific research needs.
- **Supervision.** As early as possible in Year 2, the student will submit a thesis proposal which must be approved by the end of that year. On approval of the proposal by the Music Education division of the department, a principal advisor and an advisory committee of at least three members (including the advisor as chair) will be appointed. The committee will meet with the student at least two times each academic year.
- Students must successfully complete a **comprehensive exam** by the end of Year 2. Students are permitted two attempts to complete the exam. If students are unsuccessful in their second attempt at the comprehensive exam, the department will make a recommendation for program termination.
- **Thesis.** Upon successful completion of the comprehensive examination, the candidate proceeds to complete an oral defence of the thesis proposal, a thesis, and an oral defence of the thesis.
- The **residency** requirement is two years, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.
- As governed by University of Toronto regulations, flexible-time students must be registered full-time and pay full-time fees for four years, and may apply to be registered part-time thereafter. The program requirements will be the same as those required for the full-time PhD. The difference is that students enrolled in the flexible-time PhD will have the flexibility of a part-time course load and will have an overall time limit to completion of eight years.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

Music: Music PhD; Field: Musicology

Applicants may enter the PhD program via one of two routes: 1) following completion of an appropriate master's degree or 2) direct entry following completion an appropriate bachelor's degree.

PhD Program; Field: Musicology

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- The PhD in Music, Musicology field is a research degree. Applicants must hold a master's degree with specialization in musicology, ethnomusicology, or theory, and must have an average standing of B+ or better.
- Applicants must submit an essay of approximately 3,000 words which demonstrates their ability to handle a research problem.
- Applicants, whether from the University of Toronto or elsewhere, may be interviewed by the department.
- Two letters of reference commenting on the applicant's academic ability and promise.

Completion Requirements

- **Coursework.** Students holding a master's degree specializing in musicology, ethnomusicology, or theory must fulfil the following requirements:
  - A minimum of **3.0 full-course equivalents (FCEs)** as follows:
    - MUS1250H *PhD Seminar* is taken in the first session
    - MUS1999H *Research in Musicology*
    - 1.0 FCE in graduate-only seminars in musicology
    - 1.0 FCE in electives, of which 0.5 FCE may be taken outside of Musicology, Ethnomusicology, and Music Theory (either in the Graduate Department of Music or another graduate unit). With approval from the CPA committee, one 0.5 FCE course may be deferred to the first session of Year 2.
  - Coursework should be completed during Year 1 with an average grade of at least A–. The exception is MUS1999H, which lays the groundwork for the field examination and the dissertation: this course must be started at the beginning of the second session of Year 1 and completed by the end of the first session of Year 2.
  - A course and program advising (CPA) committee will review course selections. The CPA committee will ensure course selections meet the requirements of the program and are appropriate to the field. Students may be required to take additional courses or acquire other skills to meet the needs of their proposed subjects of study.
- A set of three (written) **comprehensive exams** in (1) contemporary issues, (2) history of the field, and (3) repertoire, to be taken at the beginning of Year 2.
  - Students are permitted two attempts to complete each exam. A second attempt must take place at the beginning of the second session. If students are unsuccessful in their second attempt at the comprehensive exam, the department will make a recommendation for program termination.
- **Two research languages** in addition to English are required: one secondary and one primary. The goal is to have all language requirements fulfilled by the end of Year 2.
  - **The secondary language requirement** is the same as the MA language requirement. The default language for the secondary language requirement is German. Students who wish to choose languages other than German must submit a petition to the Division Head (either Musicology or Music Theory) by the end of the first session of Year 1. Students can fulfil the secondary language requirement in one of the following three ways:
    - Complete GER300H at U of T or its equivalent from another university, with a minimum grade of B+; or
    - Complete GER6000H; or
    - Pass a proficiency exam set by the Division.
  - Students who have fulfilled the MA language requirement at U of T may count this as the secondary language or use it as a stepping stone towards the primary language. Students are expected to complete the secondary language requirement by the end of Year 1.
  - **The primary language requirement** involves advanced reading proficiency in the chosen language. Students who wish to choose languages other than German must submit a petition to the Division Head (either Musicology or Music Theory) by the end of the first session of Year 1. Information on petitioning is available at the Faculty of Music Graduate Studies Office. Students can fulfil the secondary language requirement in one of the following three ways:
    - Complete a 400-level language course at U of T or its equivalent from another university, with a minimum grade of B+; or
    - Pass a proficiency exam set by the Division; or
    - Pass an exam in another graduate unit by arrangement through the Graduate Department of Music.
- Students are allowed two attempts at the **in-house exam**, after which they must take a language course at the appropriate MA or PhD level. All language requirements must be completed by the end of Year 3. Exceptions are granted only in extenuating circumstances and by petition.
- Students must prepare a **thesis** under the direction of an advisor and a committee and will defend it at a Doctoral Final Oral Examination. The thesis, including bibliography and appendices, should ideally be between 75,000 and 80,000 words in length. The department will not consider a thesis that exceeds 100,000 words.
- The **residency** requirement is two years, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program; Field: Musicology (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- The PhD in Music, Musicology field is a research degree. Exceptional students may be admitted directly to the doctoral stream with an appropriate bachelor's degree (direct entry). Applicants must have an average standing of A– or better.
- Applicants must submit an essay of approximately 3,000 words which demonstrates their ability to handle a research problem.
- Applicants, whether from the University of Toronto or elsewhere, may be interviewed by the department.
- Two letters of reference commenting on the applicant's academic ability and promise.

Completion Requirements

- **Coursework.** Students must complete **6.0 full-course equivalents (FCEs)** as follows:
  - 3.0 FCEs at the graduate level in Year 1 with a minimum average of A–. The exception is MUS1999H, which lays the groundwork for the field examination and the dissertation: this course must be started at the beginning of the second session of Year 1 and completed by the end of the first session of Year 2.
  - An intermediate-level language exam in Year 1. All language requirements must be completed by Year 3.
  - Following successful completion of Year 1, students must then complete all program requirements of the four-year PhD program.
  - MUS1250H *PhD Seminar*, taken in the first session of Year 2.
  - MUS1999H *Research in Musicology*.
  - 1.0 FCE in graduate-only seminars in musicology.
  - 1.0 FCE in electives, of which 0.5 FCE may be taken outside of Musicology, Ethnomusicology, and Music Theory (either in the Graduate Department of Music or another graduate unit). With approval from the course and program advising (CPA) committee, one 0.5 FCE course may be deferred to the first session of Year 2.
  - The CPA committee will review course selections, ensuring that course selections meet the requirements of the program and are appropriate to the field. Students may be required to take additional courses or acquire other skills to meet the needs of their proposed subjects of study.
- A set of three (written) **comprehensive exams** in (1) contemporary issues, (2) history of the field, and (3) repertoire, to be taken at the beginning of Year 3.
  - Students are permitted two attempts to complete each exam. A second attempt must take place at the beginning of the second session. If students are unsuccessful in their second attempt at the comprehensive exam, the department will make a recommendation for program termination.
- Two research languages in addition to English are required: one secondary and one primary. The goal is to have all language requirements fulfilled by the end of Year 2.
  - The default language for the **secondary language requirement** is German. Students who wish to choose languages other than German must submit a petition to the Division Head (either Musicology or Music Theory) by the end of the first session of Year 1. Students can fulfil the secondary language requirement in one of the following three ways:
    - Complete GER300H at U of T or its equivalent from another university, with a minimum grade of B+; or
    - Complete GER6000H; or
    - Pass a proficiency exam set by the Division.
  - Students are expected to complete the secondary language requirement by the end of Year 1.
  - **The primary language requirement** involves advanced reading proficiency in the chosen language. Students who wish to choose languages other than German must submit a petition to the Division Head (either Musicology or Music Theory) by the end of the first session of Year 1. Information on petitioning is available at the Faculty of Music Graduate Studies Office. Students can fulfil the secondary language requirement in one of the following three ways:
    - Complete a 400-level language course at U of T or its equivalent from another university, with a minimum grade of B+; or
    - Pass a proficiency exam set by the Division; or
    - Pass an exam in another graduate unit by arrangement through the Graduate Department of Music.
- Students are allowed two attempts at the **in-house exam**, after which they must take a language course at the appropriate MA or PhD level. All language requirements must be completed by the end of Year 3. Exceptions are granted only in extenuating circumstances and by petition.
- Students must prepare a **thesis** under the direction of an advisor and a committee and will defend it at a Doctoral Final Oral Examination. The thesis, including bibliography and appendices, should ideally be between 75,000 and 80,000 words in length. The department will not consider a thesis that exceeds 100,000 words.
- The **residency** requirement is three years, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Music: Music PhD; Field: Music Theory

Applicants may enter the PhD program via one of two routes: 1) following completion of an appropriate master's degree or 2) direct entry following completion a bachelor's degree.

PhD Program; Field: Music Theory

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- The PhD in Music, Music Theory field is a research degree. Applicants must hold a master's degree with appropriate specialization (normally music theory or musicology), and must have an average standing of B+ or better.
- Applicants must submit an essay of approximately 3,000 words pertaining to music theory and which demonstrates their ability to handle a research problem.
- Applicants, whether from the University of Toronto or elsewhere, may be interviewed by the department.
- Two letters of reference commenting on the applicant's academic ability and promise.

Completion Requirements

- **Coursework.** Students must complete of a minimum of **3.0 full-course equivalents (FCEs)** including:
  - MUS1250H *PhD Seminar* (taken in the first session).
  - MUS3997H *Research in Music Theory.*
  - 1.0 FCE in graduate-only seminars in music theory.
  - 1.0 FCE in electives, of which 0.5 FCE may be taken outside of musicology, ethnomusicology, and music theory (either in the Graduate Department of Music or another graduate unit). With approval from the CPA committee, one 0.5 FCE course may be deferred to the first session of Year 2.
  - Coursework should be completed during Year 1 with an average grade of at least A–. The exception is MUS3997H *Research in Music Theory*, which lays the groundwork for the field examination and dissertation: this course must be started at the beginning of the second session of Year 1 and completed by the end of the first session of Year 2.
  - Students may be required to take additional courses or acquire other skills to meet the needs of their proposed subjects of study.
  - A course and program advising (CPA) committee will review course selections. The CPA committee will ensure course selections meet the requirements of the program and are appropriate to the field.
- A set of three (written) **comprehensive exams** in (1) history of the field; (2) current issues in the field; and (3) repertoire and analysis, to be taken at the beginning of Year 2.
  - Students are permitted two attempts to complete each exam. A second attempt must take place at the beginning of the second session. If the second attempt is unsuccessful, the department will recommend termination of the student's program.
- **Two research languages** in addition to English are required: one secondary and one primary. The goal is to have all language requirements fulfilled by the end of Year 2.
  - **The secondary language requirement** is the same as the MA language requirement. The default language for the secondary language requirement is German. Students who wish to choose languages other than German must submit a petition to the Division Head (either Musicology or Music Theory) by the end of the first session of Year 1. Students can fulfil the secondary language requirement in one of the following three ways:
    - Complete GER300H at U of T or its equivalent from another university, with a minimum grade of B+; or
    - Complete GER6000H; or
    - Pass a proficiency exam set by the Division.
  - Students who have fulfilled the MA language requirement at U of T may count this as the secondary language or use it as a stepping stone towards the primary language. Students are expected to complete the secondary language requirement by the end of Year 1.
  - **The primary language requirement** involves advanced reading proficiency in the chosen language. Students who wish to choose languages other than German must submit a petition to the Division Head (either Musicology or Music Theory) by the end of the first session of Year 1. Information on petitioning is available at the Faculty of Music Graduate Studies Office. Students can fulfil the primary language requirement in one of the following three ways:
    - Complete a 400-level language course at U of T or its equivalent from another university, with a minimum grade of B+; or
    - Pass a proficiency exam set by the Division; or
    - Pass an exam in another graduate unit by arrangement through the Graduate Department of Music.
- Students are allowed two attempts at the **in-house exam**, after which they must take a language course at the appropriate MA or PhD level. All language requirements must be completed by the end of Year 3. Exceptions are granted only in extenuating circumstances and by petition.
- Students must prepare a **thesis** under the direction of an advisor and a committee and will defend it at a Doctoral Final Oral Examination. The thesis, including bibliography and appendices, should ideally be between 75,000 and 80,000 words in length. The department will not consider a thesis that exceeds 100,000 words.
- The **residency** requirement is two years, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program; Field: Music Theory (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- The PhD in Music, Music Theory field is a research degree. Exceptional students may be admitted directly to the doctoral stream with an appropriate four-year University of Toronto bachelor's degree (normally in music theory or musicology), or its equivalent from a recognized university, with at least an A– average in courses.
- Applicants must submit an essay of approximately 3,000 words pertaining to music theory and which demonstrates their ability to handle a research problem.
- Applicants, whether from the University of Toronto or elsewhere, may be interviewed by the department.
- Two letters of reference commenting on the applicant's academic ability and promise.

Completion Requirements

- **Coursework.** Students must complete **6.0 full-course equivalents (FCEs)** as follows:
  - 3.0 FCEs at the graduate level in Year 1 with a minimum average of A–. The exception is MUS3997H *Research in Music Theory*, which lays the groundwork for the field examination and dissertation: this course must be started at the beginning of the second session of Year 1 and completed by the end of the first session of Year 2.
  - An intermediate-level language exam in Year 1. All language requirements must be completed by Year 3.
  - Following successful completion of Year 1, students must then complete all program requirements of the four-year PhD program.
  - MUS1250H *PhD Seminar*, taken in the first session of Year 2.
  - MUS3997H *Research in Music Theory.*
  - 1.0 FCE in graduate-only seminars in music theory.
  - 1.0 FCE in electives, of which 0.5 FCE may be taken outside of musicology, ethnomusicology, and music theory (either in the Graduate Department of Music or another graduate unit). With approval from the CPA committee, one 0.5 FCE course may be deferred to the first session of Year 2.
  - Students may be required to take additional courses or acquire other skills to meet the needs of their proposed subjects of study.
  - A course and program advising (CPA) committee will review course selections. The CPA committee will ensure course selections meet the requirements of the program and are appropriate to the field.
- A set of three (written) **comprehensive exams** in (1) history of the field; (2) current issues in the field; and (3) repertoire and analysis, to be taken at the beginning of Year 3.
  - Students are permitted two attempts to complete each exam. A second attempt must take place at the beginning of the second session. If the second attempt is unsuccessful, the department will recommend termination of the student's program.
- **Two research languages** in addition to English are required: one secondary and one primary. The goal is to have all language requirements fulfilled by the end of Year 2.
  - The default language for the **secondary language requirement** is German. Students who wish to choose languages other than German must submit a petition to the Division Head (either Musicology or Music Theory) by the end of the first session of Year 1. Students can fulfil the secondary language requirement in one of the following three ways:
    - Complete GER300H at U of T or its equivalent from another university, with a minimum grade of B+; or
    - Complete GER6000H; or
    - Pass a proficiency exam set by the Division.
  - Students are expected to complete the secondary language requirement by the end of Year 1.
  - **The primary language requirement** involves advanced reading proficiency in the chosen language. Students who wish to choose languages other than German must submit a petition to the Division Head (either Musicology or Music Theory) by the end of the first session of Year 1. Information on petitioning is available at the Faculty of Music Graduate Studies Office. Students can fulfil the primary language requirement in one of the following three ways:
    - Complete a 400-level language course at U of T or its equivalent from another university, with a minimum grade of B+; or
    - Pass a proficiency exam set by the Division; or
    - Pass an exam in another graduate unit by arrangement through the Graduate Department of Music.
- Students are allowed two attempts at the **in-house exam**, after which they must take a language course at the appropriate MA or PhD level. All language requirements must be completed by the end of Year 3. Exceptions are granted only in extenuating circumstances and by petition.
- Students must prepare a **thesis** under the direction of an advisor and a committee and will defend it at a Doctoral Final Oral Examination. The thesis, including bibliography and appendices, should ideally be between 75,000 and 80,000 words in length. The department will not consider a thesis that exceeds 100,000 words.
- The **residency** requirement is three years, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Music: Music Performance MMus; Field: Applied Music and Health

Master of Music Program; Field: Applied Music and Health

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- Applicants to the MMus program must hold a Bachelor of Music degree in the area of specialization from the University of Toronto with an average standing of mid-B or better over the final two years or an equivalent program (Bachelor of Music or Bachelor of Arts in Music) and standing from another recognized university.
- Selected applicants must pass an audition and interview.
- Two letters of reference commenting on the applicant's music performance ability, academic ability, and professional promise.

Completion Requirements

- **Coursework.** Students must complete **9.0 full-course equivalents (FCEs)** as follows:
  - Year 1:
    - MUS4112Y *Clinical Performance Practicum*
    - MUS4165Y *Applied Music for Clinical Practice*
    - MUS4166Y *Performance Project*
    - MUS7406H *Music Psychology*
    - MUS7412H *Elementary Improvisation Methods*
    - MUS7415H *Topics in Music and Health Care I*
    - MUS7416H *Topics in Music and Health Care II*
    - 0.5 FCE: an approved counselling elective course
    - Note: students who have not previously completed MUS7400H *Introduction to Music and Health Care* (or an equivalent course) will be required to complete MUS7400H in Year 1 in addition to the program requirements listed above.
  - Year 2:
    - MUS4115Y *Principles of Clinical Performance Pedagogy*
    - MUS4188Y *Public Capstone Presentation*
    - MUS7110H *Neurosciences of Music: Scientific Foundations, Clinical Translations*
    - MUS7407H *Clinical Research Practicum*
    - MUS4188Y *Public Capstone Presentation*
  - 0.5 FCE: elective in Music or, with permission, outside of Music. MUS4120H *Clinical Voice Pedagogy* is recommended.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Music: Music Performance MMus; Field: Collaborative Piano

Master of Music Program; Field: Collaborative Piano

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- Applicants to the MMus program must hold a Bachelor of Music degree in the area of specialization from the University of Toronto with an average standing of mid-B or better over the final two years or an equivalent program and standing from another recognized university.
- Selected applicants must pass an audition.
- Two letters of reference commenting on the applicant's music performance ability, academic ability, and professional promise.

Completion Requirements

- **Coursework.** Students must complete **7.0 full-course equivalents (FCEs)** as follows:
  - MUS4200Y *Critical Approaches to Music History*, normally taken in Year 1
  - MUS4444Y *Applied Music I*
  - MUS4445Y *Applied Music II*
  - 0.5 FCE selected from
    - MUS4600H *Performance Practices Before 1800*
    - MUS4610H *Analysis and Performance: Music of the Eighteenth and Nineteenth Centuries*
    - MUS4615H *Analysis and Performance Practices of Twentieth-Century Music*
  - MUS4210H *Introduction to Music Analysis*
  - MUS4213H *Advanced Repertoire for Singers and Pianists I*
  - MUS4214H *Advanced Repertoire for Singers and Pianists II*
  - MUS4502H *Collaborative Piano Techniques I*
  - MUS4506H *Sonata Coaching I*
  - MUS4508H *Collaborative Piano Techniques II* **or** MUS4509H *Collaborative Piano Techniques II Vocal*
  - 0.5 FCE: elective.
- Based on the outcome of preliminary consultations with the department, students may be required to take:
  - MUS4520H *Advanced Diction Studies I* **or**
  - MUS4521H *Advanced Diction Studies II — Italian* **or**
  - MUS4522H *Advanced Diction Studies III*.
- **Two recitals**, one in each year:
  - MUS6666Y *Recital I*
  - MUS8888Y *Recital II*.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Music: Music Performance MMus; Field: Composition

Master of Music Program; Field: Composition

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- Applicants to the MMus program must hold a Bachelor of Music degree in the area of specialization from the University of Toronto with an average standing of mid-B or better over the final two years or an equivalent program and standing from another recognized university.
- Applicants must submit several original compositions, at least one of which shall be with moderately large instrumentation.
- Two letters of reference commenting on the applicant's composition ability, academic ability, and professional promise.

Completion Requirements

- **Coursework.** Students must complete a minimum of **6.0 full-course equivalents (FCEs)** taken over two years, including:
  - MUS3100Y *MMus Advanced Composition I*
  - MUS3105Y *MMus Advanced Composition II*
  - MUS3990Y *MMus Composition Thesis*
  - 3.0 elective FCEs.
- Students may be required to take courses in addition to the 6.0 FCEs based on the results of diagnostic tests in musical analysis, counterpoint, and harmony given upon entrance.
- Under the guidance of an advisor, each student will prepare an **original composition** in large form or an electroacoustic composition of comparable dimensions which will be defended at a **Final Oral Examination**.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Music: Music Performance MMus; Field: Conducting

Master of Music Program; Field: Conducting

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- Applicants to the MMus program must hold a Bachelor of Music degree in the area of specialization from the University of Toronto with an average standing of mid-B or better over the final two years or an equivalent program and standing from another recognized university.
- Selected applicants must pass an audition.
- Two letters of reference commenting on the applicant's music performance ability, academic ability, and professional promise.

Completion Requirements

- **Coursework.** Students in choral conducting must complete a total of **8.0 full-course equivalents (FCEs)**. Students in orchestral conducting and wind ensemble conducting must complete **7.0 FCEs.**
  - MUS4200Y *Critical Approaches to Music History*, normally taken in Year 1.
  - 0.5 FCE selected from:
    - MUS4600H *Performance Practices Before 1800* **or** MUS4606H *Special Topics in Performance Practice*
    - MUS4610H *Analysis and Performance: Music of the Eighteenth and Nineteenth Centuries*
    - MUS4615H *Analysis and Performance Practices of Twentieth-Century Music*
  - MUS4210H *Introduction to Music Analysis*
  - MUS4444Y *Applied Music I*
  - MUS4445Y *Applied Music II*
  - Students in **choral conducting** must also complete 4.0 FCEs as follows:
    - MUS4220H *Orchestral Conducting I*
    - MUS4223H *Choral Conducting I*
    - MUS4224H *Choral Conducting II*
    - MUS4225Y *Advanced Choral Conducting*
    - MUS4230Y *Vocal-Choral Pedagogy for Conductors*
    - MUS4700H *Major Ensemble I* (choral).
  - Students in **orchestral conducting** must also complete 3.0 FCEs as follows:
    - MUS4220H *Orchestral Conducting I*
    - MUS4221H *Orchestral Conducting II*
    - MUS4222Y *Advanced Orchestral Conducting*
    - MUS4223H *Choral Conducting I*
    - 0.5 FCE: elective
  - Students in **wind ensemble conducting** must also complete 3.0 FCEs as follows:
    - MUS2203H *Development of the Wind Band*
    - MUS4226H *Wind Ensemble Conducting I*
    - MUS4227H *Wind Ensemble Conducting II*

        - MUS4228H *Advanced Wind Conducting I*
        - MUS4229H *Advanced Wind Conducting II*
        - 0.5 FCE: elective
- **Two recitals**, one in each year:
    - MUS6666Y *Recital I*
    - MUS8888Y *Recital II*.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Music: Music Performance MMus; Field: Historical Performance

Master of Music Program; Field: Historical Performance

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- Applicants to the MMus program must hold a Bachelor of Music degree in the area of specialization from the University of Toronto with an average standing of mid-B or better over the final two years or an equivalent program and standing from another recognized university.
- Selected applicants must pass an audition.
- Two letters of reference commenting on the applicant's music performance ability, academic ability, and professional promise.

Completion Requirements

- **Coursework.** Students must complete **7.0 full-course equivalents (FCEs)** as follows:
    - 5.0 FCEs must include:
        - MUS4200Y *Critical Approaches to Music History*, normally taken in Year 1
        - MUS4444Y *Applied Music I* and MUS4445Y *Applied Music II*
        - 0.5 FCE selected from:
            - MUS4600H *Performance Practices Before 1800*
            - MUS4606H *Special Topics in Performance Practice*
            - MUS4610H *Analysis and Performance: Music of the Eighteenth and Nineteenth Centuries*
            - MUS4615H *Analysis and Performance Practices of Twentieth-Century Music*
        - MUS4210H *Introduction to Music Analysis*
        - 1.0 FCE in large ensembles:
            - MUS4774H *Schola Cantorum I* and MUS4775H *Schola Cantorum II* **or** MUS4776H *Collegium Musicum I* and MUS4777H *Collegium Musicum II*
    - 2.0 elective FCEs from a specified list approved by the department.
- **Two recitals**, one in each year. Recitals may include a chamber component with the approval of the department.
    - MUS6666Y *Recital I*
    - MUS8888Y *Recital II.*

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Music: Music Performance MMus; Field: Instrumental

Master of Music Program; Field: Instrumental

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- Applicants to the MMus program must hold a Bachelor of Music degree in the area of specialization from the University of Toronto with an average standing of mid-B or better over the final two years or an equivalent program and standing from another recognized university.
- Selected applicants must pass an audition.
- Two letters of reference commenting on the applicant's music performance ability, academic ability, and professional promise.

Completion Requirements

- **Coursework.** Students must complete **7.0 full-course equivalents (FCEs)**, of which 5.0 FCEs must include:
    - MUS4200Y *Critical Approaches to Music History*, normally taken in Year 1
    - MUS4210H *Introduction to Music Analysis*
    - MUS4444Y *Applied Music I*
    - MUS4445Y *Applied Music II*
    - 0.5 FCE selected from
        - MUS4600H *Performance Practices Before 1800* **or** MUS4606H *Special Topics in Performance Practice*
        - MUS4610H *Analysis and Performance: Music of the Eighteenth and Nineteenth Centuries*
        - MUS4615H *Analysis and Performance Practices of Twentieth-Century Music*
    - Students in brass, percussion, strings, and woodwinds will complete 1.0 FCE as two years of ensemble performance. Placement to be determined by audition.

    - Students in piano solo performance must complete MUS5700H *Piano Master Class I* and MUS5701H *Piano Master Class II*.
    - In place of the ensemble performance, accordion, guitar, harp, harpsichord, organ, and piano students will select 1.0 FCE in elective courses from a specified list approved by the department.
- **Two recitals**, one in each year. Recitals may include a chamber music component with the approval of the department:
    - MUS6666Y *Recital I*
    - MUS8888Y *Recital II*.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Music: Music Performance MMus; Field: Jazz

Master of Music Program; Field: Jazz

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- Applicants to the MMus program must hold a Bachelor of Music degree in the area of specialization from the University of Toronto with an average standing of mid-B or better over the final two years or an equivalent program and standing from another recognized university.
- Selected applicants must pass an audition.
- Two letters of reference commenting on the applicant's music performance ability, academic ability, and professional promise.

Completion Requirements

- **Coursework.** Students must complete **7.0 full-course equivalents (FCEs)** including:
    - MUS4300Y, normally taken in Year 1
    - MUS4444Y *Applied Music I*
    - MUS4445Y *Applied Music II*
    - MUS4606H *Special Topics in Performance Practice* **and** MUS4615H *Analysis and Performance Practices of Twentieth-Century Music*
    - MUS4310Y *Advanced Jazz Composition and Arranging I* **or** MUS4311Y *Advanced Jazz Composition and Arranging II*
    - 1.0 elective FCE
    - Students must also include in their programs 1.0 FCE selected from one or more of the following areas:
        - Small Group Jazz Ensemble Performance
            - MUS4740H *Small Group Jazz Performance I*
            - MUS4741H *Small Group Jazz Performance II*
            - MUS4742H *Small Group Jazz Performance III*
        - Jazz Orchestra
            - MUS4750H *Jazz Orchestra I*
            - MUS4751H *Jazz Orchestra II*
            - MUS4752H *Jazz Orchestra III*
            - MUS4753H *Jazz Orchestra IV*
        - Vocal Jazz Ensemble
            - MUS4760H *Vocal Jazz Ensemble I*
            - MUS4761H *Vocal Jazz Ensemble II*
            - MUS4762H *Vocal Jazz Ensemble III*
            - MUS4763H *Vocal Jazz Ensemble IV*.
- **Two recitals**, one in each year. However, students may elect to replace one recital with a significant recording project.
    - MUS6666Y *Recital I*
    - MUS8888Y *Recital II*.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Music: Music Performance MMus; Field: Music Technology and Digital Media

Master of Music Program; Field: Music Technology and Digital Media

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- Applicants to the MMus program must hold a Bachelor of Music degree in the area of specialization from the University of Toronto with an average standing of mid-B or better over the final two years or an equivalent program and standing from another recognized university.
- Applicants must submit a portfolio (for example, scores, recordings, multimedia creations) that demonstrates at least two of the following:
- knowledge of computer applications in music;
- competency in music performance or composition (acoustic or digital);
- released body of musical works/recordings as composer, sound engineer, or producer.
- Selected applicants must pass an audition and interview.
- Two letters of reference commenting on the applicant's music performance ability, academic ability, and professional promise.

Completion Requirements

- **Coursework.** Students must complete **7.0 full-course equivalents (FCEs)** as follows:

- Year 1 (3.5 FCEs)
  - MUS3610H *Music Entrepreneurship: Music and Cities*
  - MUS3611H *Creative Applications of Technology I*
  - MUS3612H *Creative Applications of Technology II*
  - MUS3614H *Sound Recording I*
  - MUS3615H *Sound Recording II*
  - 1.0 elective FCE:
    - ❖ 0.5 FCE selected from Music Technology and Digital Media and
    - ❖ 0.5 FCE selected from any of the Faculty of Music graduate courses.
- Year 2 (3.5 FCEs)
  - JDM3619H *Digital Media Distribution*
  - 2.0 FCEs: electives selected from an approved department list, or from another graduate unit, with permission.
  - MUS3666Y *Music Technology and Digital Media Major Project*, completed in Year 2, consisting of a new musical composition or version recorded, mixed, produced, and mastered, integrating at least two media such as electronic and acoustic, music for picture, or live performance with multimedia.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Music: Music Performance MMus; Field: Opera

Master of Music Program; Field: Opera

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- Applicants to the MMus program must hold a Bachelor of Music degree in the area of specialization from the University of Toronto with an average standing of mid-B or better over the final two years or an equivalent program and standing from another recognized university.
- Selected applicants must pass an audition.
- Two letters of reference commenting on the applicant's music performance ability, academic ability, and professional promise.

Completion Requirements

- **Coursework.** Students must complete **7.0 full-course equivalents (FCEs)** as follows:
  - MUS4200Y *Critical Approaches to Music History*, taken in Year 1
  - MUS4210H *Introduction to Music Analysis*
  - MUS4444Y *Applied Music I*
  - MUS4445Y *Applied Music II*
  - MUS4513Y *Operatic Repertory*, taken in Year 2
  - MUS4900Y *Operatic Studies I* and MUS4901Y *Operatic Studies II*
  - 0.5 FCE: elective chosen from a specified list approved by the department.
- **Performance** in operatic productions will be evaluated by a committee and assigned grades under MUS4966Y *Operatic Roles I* and MUS4988Y *Operatic Roles II*.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Music: Music Performance MMus; Field: Piano Pedagogy

Master of Music; Field: Piano Pedagogy

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- Applicants to the MMus program must hold a Bachelor of Music degree in the area of specialization from the University of Toronto with an average standing of mid-B or better over the final two years or an equivalent program and standing from another recognized university.
- Selected applicants must pass an audition.
- Two letters of reference commenting on the applicant's music performance ability, academic ability, and professional promise.

Completion Requirements

- **Coursework.** Students must complete **7.0 full-course equivalents (FCEs)** as follows:
  - MUS4200Y *Critical Approaches to Music History*, normally taken in Year 1.
  - MUS4210H *Introduction to Music Analysis*
  - MUS4444Y *Applied Music I.*
  - MUS4445Y *Applied Music II*
  - MUS4270H *Piano Pedagogy: Beginning and Intermediate Levels*
  - MUS4271H *Practicum: Beginning and Intermediate Levels*
  - MUS4272H *Piano Pedagogy: Advanced and University Levels*
  - MUS4273H *Practicum: Advanced and University Levels*
  - 0.5 FCE selected from:
    - MUS4600H *Performance Practices Before 1800*
    - MUS4610H *Analysis and Performance: Music of the Eighteenth and Nineteenth Centuries*

        - MUS4615H *Analysis and Performance Practices of Twentieth-Century Music*
    - 1.0 FCE: electives.
- **Two recitals.** With approval, one recital may be replaced by a pedagogy project and presentation.
    - MUS6666Y *Recital I*
    - MUS8888Y *Recital II*.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Music: Music Performance MMus; Field: Vocal

Master of Music Program; Field: Vocal

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- Applicants to the MMus program must hold a Bachelor of Music degree in the area of specialization from the University of Toronto with an average standing of mid-B or better over the final two years or an equivalent program and standing from another recognized university.
- Selected applicants must pass an audition.
- Two letters of reference commenting on the applicant's music performance ability, academic ability, and professional promise.

Completion Requirements

- **Coursework.** Students must complete **7.0 full-course equivalents (FCEs)** as follows:
    - 4.0 FCEs must include:
        - MUS4200Y *Critical Approaches to Music History*, normally taken in Year 1
        - MUS4210H *Introduction to Music Analysis*
        - MUS4444Y *Applied Music I*
        - MUS4445Y *Applied Music II*
        - 0.5 FCE selected from:
            - MUS4600H *Performance Practices Before 1800* **or** MUS4606H *Special Topics in Performance Practice*;
            - MUS4610H *Analysis and Performance: Music of the Eighteenth and Nineteenth Centuries*;
            - MUS4615H *Analysis and Performance Practices of Twentieth-Century Music*
    - 3.0 FCEs: electives chosen from a specified list approved by the department.
- **Two recitals.** Recitals may include a chamber music component with the approval of the department.
    - MUS6666Y *Recital I*
    - MUS8888Y *Recital II*.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Music: Music Performance MMus; Field: Vocal Pedagogy

Master of Music; Field: Vocal Pedagogy

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- Applicants to the MMus program must hold a Bachelor of Music degree in the area of specialization from the University of Toronto with an average standing of mid-B or better over the final two years or an equivalent program and standing from another recognized university.
- Selected applicants must pass an audition.
- Two letters of reference commenting on the applicant's music performance ability, academic ability, and professional promise.

Completion Requirements

- **Coursework.** Students must complete **8.0 full-course equivalents (FCEs)** as follows:
    - MUS4200Y *Critical Approaches to Music History*, normally taken in Year 1
    - MUS4210H *Introduction to Music Analysis*
    - 0.5 FCE selected from:
        - MUS4213H *Advanced Repertoire for Singers and Pianists I*
        - MUS4231H *Advanced Vocal Repertoire Study I*
    - MUS4240Y *Introduction to Voice Pedagogy and Vocology*
    - MUS4241Y *Advanced Vocal Pedagogy and Vocology*
    - MUS4248H *Optimizing the Singing Mind*
    - MUS4444Y *Applied Music I*
    - MUS4445Y *Applied Music II*
    - 0.5 FCE selected from
        - MUS4600H *Performance Practices Before 1800*
        - MUS4610H *Analysis and Performance: Music of the Eighteenth and Nineteenth Centuries*
        - MUS4615H *Analysis and Performance Practices of Twentieth-Century Music*
    - MUS7406H *Music Psychology*
    - 0.5 FCE: elective chosen from a list of courses approved by the department.
- **Two recitals:**
    - MUS6666Y *Recital I*
    - MUS8888Y *Recital II*.

Mode of Delivery: In person

Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Music: Music Performance DMA; Field: Composition

Doctor of Musical Arts Program; Field: Composition

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- Applicants for the DMA in the Composition field must hold a Master of Music Performance degree specializing in Composition from the University of Toronto, or its equivalent from another recognized university, with an average standing of B+ or better.
- Two or more extended compositions in various media and a recording of at least one of these works must be submitted together with the application and complete academic credentials.
- Two letters of reference commenting on the applicant's composition ability, academic ability, and professional promise.

Completion Requirements

- **Coursework.** Students must complete a minimum of **5.0 full-course equivalents (FCEs)**, including:
  - MUS3300Y *DMA Advanced Composition I*
  - MUS3305Y *DMA Advanced Composition II*
  - MUS3999Y *Research in Composition*, selected in consultation with the advisory committee
  - Students entering from outside the University of Toronto will be given diagnostic tests in musical analysis, counterpoint, and harmony, the result of which may be additional course requirements beyond the 5.0 FCEs.
- Upon completion of coursework, students are required to present a **recital of original works** (MUS3888Y *DMA Recital of Works*) to the satisfaction of the department. In some cases, professional-quality tapes of performances totalling the equivalent of a full recital may be substituted.
- The **thesis** for the DMA shall be an extended composition approved by the department, prepared under the supervision of an advisory committee and defended at the **Doctoral Final Oral Examination**.
- The **residency** requirement is two years, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.

Mode of Delivery: In person

Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

Music: Music Performance DMA; Field: Performance

Doctor of Musical Arts Program; Field: Performance

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Music's additional admission requirements stated below.
- Applicants for the DMA in the Performance field must hold a Master of Music degree specializing in Performance from the University of Toronto, or its equivalent from another university, with an average standing of B+ or better.
- Applicants are required to pass an audition.
- An essay of approximately 3,000 words which demonstrates the student's ability to handle a research problem.
- Applicants, whether from the University of Toronto or elsewhere, may be interviewed by the department.
- Two letters of reference commenting on the applicant's music performance ability, academic ability, and professional promise.

Completion Requirements

- **Coursework.** Students must complete a minimum of **5.0 full-course equivalents (FCEs)** as follows:
  - MUS4800Y *DMA Seminar,* taken in the first session.
  - MUS4899H *Research in Performance,* begun in the second session.
  - MUS4844Y *Advanced Applied Music I*.
  - MUS4845Y *Advanced Applied Music II*.
  - The remaining 1.5 FCEs must be graduate seminar courses.
  - Coursework should be completed by the end of Year 2 with an average grade of at least A–. Exceptions to the time of completion are:
    - MUS4899Y *Research in Performance*, to be taken in the Winter session of Year 1 and the Fall of Year 2, which lays the groundwork for the dissertation research and leads to a field examination at the end of Year 2; and
    - MUS4845Y *Advanced Applied Music II*. Students may be required to take additional courses or acquire other skills to meet the needs of their proposed areas of study.
- Students are permitted two attempts to complete the **field examination**. If students are unsuccessful in their second attempt at the field examination, the department will make a recommendation for program termination.
- **Three DMA recitals.**

    - MUS4866Y *DMA Recital I.*
    - MUS4877Y *DMA Recital II.*
    - MUS4888Y *DMA Recital III*.
    - The format of these recitals will be determined in consultation with the supervisor and the supervisory committee.
- Reading knowledge of **one language** other than English is required. The required language will be determined by the department. The department may require competence in additional languages. All remaining course and language requirements, including the field exam, must be completed successfully by the end of Year 2.
- The **residency** requirement is two years, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

Music: Music MA, PhD; Field: Music and Health Sciences Courses

Course Code	Course Title
MUS4120H	Clinical Voice Pedagogy
MUS7110H	Neurosciences of Music: Scientific Foundations, Clinical Translations
MUS7199H	Special Research Topic in Music and Health
MUS7400H	Introduction to Music and Health Care
MUS7405H	Health in Music Performance
MUS7406H	Music Psychology
MUS7407H	Clinical Research Practicum
MUS7412H	Elementary Improvisation Methods
MUS7415H	Topics in Music and Health
MUS7416H	Topics in Music and Health II
MUS7995Y	Music and Health Doctoral Research Project
MUS7998H	Readings in Advanced Topics in Music and Health

Music: Music MA, PhD; Field: Music Education Courses

Course Code	Course Title
MUS2001H	Music in Cultural Perspective
MUS2004H	Music for Children
MUS2010H	Music and Social Movements
MUS2111H	Introduction to Research in Music Education
MUS2112H	Advanced Topics in Research in Music Education
MUS2113H	Musically Queer
MUS2114H	Black Music and Music Education
MUS2115H	Truth and Reconciliation
MUS2116H	Moral Economy of Death in Music, Education, and Pedagogy
MUS2117H	Sound Studies and Music Education
MUS2132H	Jazz Education
MUS2151H	Philosophy and Music Education
MUS2160H	Contemporary Perspectives in Music Education
MUS2167H	Curriculum Inquiry
MUS2175H	Teacher Perspectives in Music Education
MUS2176H	Social Psychology of Music
MUS2185H	Curriculum and Instruction in Instrumental Music
MUS2186H	(Un)popular Music Education
MUS2199H	Special Topics in Music Education
MUS2203H	Development of the Wind Band
MUS2222H	Conducting and Teaching Choral Music I
MUS2223H	Conducting and Teaching Choral Music II
MUS2990Y	MA Major Essay (Music Education)
MUS2995Y	Music Education Doctoral Research Project
MUS2998H	Reading in Advanced Topics in Music Education
MUS3231H	Conducting for Composers
MUS7406H	Music Psychology
MUS7412H	Elementary Improvisation Methods

Music: Music MA, PhD; Field: Music Theory Courses

Course Code	Course Title
MUS1006H	Public Music Scholarship

Course Code	Course Title
MUS1250H	PhD Seminar
MUS1990H	MA Major Paper
MUS1998H	Individual Reading and Research
MUS3101H	Seminar in Schenkerian Analysis I
MUS3113H	Symphonic Modernisms, 1900–1925
MUS3232H	Romantic Form
MUS3243H	The Music of Elliott Carter
MUS3248H	Current Compositional Practices
MUS3250H	Alternatives: Music out of the Mainstream
MUS3251H	Late Schubert
MUS3261H	Theory and Analysis of Popular Music
MUS3262H	Theoretical Perspectives on Global Musics
MUS3265H	Music Cognition
MUS3266H	Public Music Theory
MUS3306H	Pedagogy of Music Theory
MUS3316H	Cognitive Perspectives in Music Theory
MUS3403H	Theory and Analysis of Atonal Music
MUS3404H	Extended Tonal Techniques in Twentieth-Century Music
MUS3405H	Topics in the History of Music Theory: 1600–1950
MUS3406H	Current Perspectives on Music Theory
MUS3411H	Analytical Methodologies
MUS3412H	Theories of Rhythm and Metre
MUS3413H	Music and Drama in Wagner's Ring des Nibelungen
MUS3997H	Research in Music Theory

Music: Music MA, PhD; Fields: Ethnomusicology and Musicology Courses

Final course offerings may vary. Students should consult the departmental handbook.

Course Code	Course Title
MUS1000H	Introduction to Music Research I
MUS1002H	Fieldwork Methods and Practicum
MUS1005H	Public Musicology
MUS1006H	Public Music Scholarship
MUS1042H	The Ballets Russes
MUS1056H	Approaches to Meaning in the Renaissance Motet
MUS1057H	Performing Politics: Individuality and the Collective in Music and Dance
MUS1058H	Music and Politics
MUS1065H	Music History Pedagogy
MUS1066H	Music and the Racial and Ethnic Imaginations
MUS1069H	Remix Music, from Analogue to Digital
MUS1070H	Music, Genre, and Variation
MUS1106H	Early Music in Canada
MUS1131H	Popular Music and the Immaterial: From Spirituality to Virtuality
MUS1132H	Community-Engaged Music Archiving
MUS1134H	Music, Capital, Markets, and Industries
MUS1135H	Music, Sound, and the Environment
MUS1137H	Nationalism in Music and Dance
MUS1140H	Romantic Musings on the Middle Ages
MUS1141H	Ethnomusicology of Voice
MUS1142H	Sound, Music, and Everyday Life
MUS1144H	Music in the Films of Sir Alfred Hitchcock
MUS1145H	Sonic Innovations in Black Popular Musics
MUS1146H	Geographies of Opera: Wagner and Puccini
MUS1147H	Music After the DJ, from Soundsystems to Serato
MUS1148H	Musical Anthropologies of Listening
MUS1149H	Hip-Hop in the City
MUS1150H	Music and Land: Sounds of Belonging and Exclusion
MUS1169H	Listening to Cities: Music, Sound, and Noise in Urban Environments
MUS1234H	Health, Aging and Popular Music
MUS1240H	Diegetic Music in Film
MUS1247H	Sounds and Discourses of Hybridity in Latin American and Caribbean Music
MUS1250H	PhD Seminar
MUS1255H	Issues in Music and Philosophy
MUS1258H	Keywords in African Sound
MUS1260H	Music and the Enlightenment
MUS1267H	Popular Music and Identity

Course Code	Course Title
MUS1270H	Music and East Asian Modernity
MUS1271H	Music and Circulation
MUS1272H	19th-Century Music and Discourses of Nature
MUS1275H	Sound and Music in the Middle East
MUS1276H	Music and Material Culture
MUS1278H	Music and Cultures of Listening in Late Modernity
MUS1279H	Ethnomusicology without Music
MUS1280H	Analysis and its Futures in Ethnomusicology
MUS1281H	Ethnomusicology Dissertation Writing Seminar
MUS1990H	MA Major Paper or Project
MUS1997H	Research in Ethnomusicology
MUS1998H	Individual Reading and Research
MUS1999H	Research in Musicology
MUS3265H	Music Cognition
MUS3266H	Public Music Theory

Music: Music Performance MMus, DMA; Field: Composition Courses

Final course offerings may vary. Students should consult the departmental handbook.

Course Code	Course Title
MUS3100Y	MMus Advanced Composition I
MUS3101H	Seminar in Schenkerian Analysis I
MUS3102H	Seminar in Schenkerian Analysis II
MUS3105Y	MMus Advanced Composition II
MUS3110H	Classical Orchestration
MUS3114H	Counterpoint and Diversity
MUS3115H	Counterpoint: A Practical Exercise in Democracy
MUS3116H	Learning from the Visual Arts for Composers
MUS3203H	Score Analysis for Composers and Conductors
MUS3204H	Advanced Orchestration
MUS3205H	Score Analysis II for Composers and Conductors
MUS3207H	Rhythm: Compositional Approaches to Measuring Time
MUS3211H	Composing for Dance
MUS3213H	Composing for Chamber Ensemble
MUS3214H	Music and the Machine
MUS3219H	The Composer as Philosopher
MUS3220H	Timbre and Orchestration Studies
MUS3222H	Composing for Film
MUS3223H	Berg
MUS3224H	Sonata Form
MUS3225H	Music of Gubaidulina, Coulthard, and Chen
MUS3228H	Classical Form
MUS3229H	The Twentieth-Century Symphony
MUS3230H	The Music of Messiaen, Schnittke, and Pärt
MUS3231H	Conducting for Composers
MUS3232H	Romantic Form
MUS3233H	Compositional Identity and Practice in the 21st Century
MUS3244H	Music Recording
MUS3255H	Composing Music
MUS3258H	Songwriting
MUS3260H	The New Polish School of Composition
MUS3300Y	DMA Advanced Composition I
MUS3305Y	DMA Advanced Composition II
MUS3306H	Pedagogy of Music Theory
MUS3403H	Theory and Analysis of Atonal Music
MUS3404H	Extended Tonal Techniques in the Twentieth Century
MUS3409H	Advanced Analysis
MUS3410H	Advanced Analysis: 1850–1910
MUS3412H	Theories of Rhythm and Metre
MUS3415H	Introduction to Operatic Composition
MUS3420H	Composing for Percussion
MUS3421H	Composing for Theatre
MUS3800H	Electroacoustic Music
MUS3801H	Advanced Electro-acoustic Composition
MUS3888Y	DMA Recital of Works
MUS3990Y	MMus Composition Thesis
MUS3998H	Reading and Research in Composition
MUS3999Y	Research in Composition

Course Code	Course Title
MUS4615H	Analysis and Performance Practices of Twentieth-Century Music

Music: Music Performance MMus, DMA; Field: Performance Courses

Course Code	Course Title
MUS4120H	Clinical Voice Pedagogy
MUS4200Y	Critical Approaches to Music History
MUS4210H	Introduction to Music Analysis
MUS4213H	Advanced Repertoire for Singers and Pianists I
MUS4214H	Advanced Repertoire for Singers and Pianists II
MUS4219H	Perspectives on the Business of Music Performance
MUS4220H	Orchestral Conducting I
MUS4221H	Orchestral Conducting II
MUS4222Y	Advanced Orchestral Conducting
MUS4223H	Choral Conducting I
MUS4224H	Choral Conducting II
MUS4225Y	Advanced Choral Conducting
MUS4226H	Wind Ensemble Conducting I
MUS4227H	Wind Ensemble Conducting II
MUS4228H	Advanced Wind Conducting I
MUS4229H	Advanced Wind Conducting II
MUS4231H	Advanced Vocal Repertoire Study I
MUS4232H	Advanced Vocal Repertoire Study II
MUS4233H	Performing as a Freelance Musician in North America
MUS4234H	Explorations in Performance
MUS4240Y	Introduction to Voice Pedagogy and Vocology
MUS4241H	Advanced Vocal Pedagogy and Vocology
MUS4242Y	Advanced Concepts in Singing and Vocology
MUS4248H	Optimizing the Singing Mind
MUS4270H	Piano Pedagogy: Beginning and Intermediate Levels
MUS4271H	Practicum: Beginning and Intermediate Levels
MUS4272H	Piano Pedagogy: Advanced and University Levels
MUS4273H	Practicum: Advanced and University Levels
MUS4274H	Advanced Performance: Piano Technology and Technique
MUS4298H	Readings and Research in Performance Studies
MUS4300Y	Seminar in Jazz Studies
MUS4302H	Advanced Ear Training and Harmony
MUS4303H	Rhythm for Improvisation
MUS4310Y	Advanced Jazz Composition and Arranging I
MUS4311Y	Advanced Jazz Composition and Arranging II
MUS4312H	Advanced Jazz Improvisation I
MUS4314H	Advanced Jazz Improvisation 2
MUS4376H	Piano Literature — Baroque and Classical
MUS4420H	Fretboard Harmony: Common Practice Harmony on the Guitar
MUS4425H	Guitar Pedagogy: Method and Practice
MUS4435H	History and Literature of the Guitar
MUS4438H	Improvisation for Strings
MUS4439H	Flute-Guitar Masterclass
MUS4440H	Flute-Guitar Masterclass II
MUS4444Y	Applied Music I
MUS4445Y	Applied Music II
MUS4502H	Collaborative Piano Techniques I
MUS4506H	Sonata Coaching I
MUS4507H	Sonata Coaching II
MUS4508H	Collaborative Piano Techniques II
MUS4509H	Collaborative Piano Techniques II Vocal
MUS4512H	Operatic Répétiteur
MUS4513Y	Operatic Repertory
MUS4520H	Advanced Diction Studies I
MUS4521H	Advanced Diction Studies II — Italian
MUS4522H	Advanced Diction Studies III
MUS4523H	Advanced Diction Studies — English
MUS4600H	Performance Practices Before 1800
MUS4606H	Special Topics in Performance Practice
MUS4608H	World Music Ensembles: Practical and Analytical Studies
MUS4610H	Analysis and Performance: Music of the Eighteenth and Nineteenth Centuries

Course Code	Course Title
MUS4613H	Performance Techniques for Hospice Palliative Care
MUS4615H	Analysis and Performance Practices of Twentieth-Century Music
MUS4616H	Topics in Interactive Digital Media and Performance
MUS4617H	The 21st-Century Creative Performer: An Interdisciplinary Inquiry to Performance and Performance Practice
MUS4626H	Music Internship
MUS4626Y	Music Internship
MUS4700H	Major Ensemble I
MUS4701H	Major Ensemble II
MUS4703H	Major Ensemble IV
MUS4706H	Contemporary Chamber Ensemble I
MUS4707H	Contemporary Chamber Ensemble II
MUS4710H	Chamber Music I
MUS4711H	Chamber Music II
MUS4716H	Chamber Choir III
MUS4720H	Opera I
MUS4721H	Opera II
MUS4722H	Opera III
MUS4723H	Opera IV
MUS4740H	Small Group Jazz Performance I
MUS4741H	Small Group Jazz Performance II
MUS4742H	Small Group Jazz Performance III
MUS4747H	Baroque String Repertoire
MUS4750H	Jazz Orchestra I
MUS4751H	Jazz Orchestra II
MUS4752H	Jazz Orchestra III
MUS4753H	Jazz Orchestra IV
MUS4760H	Vocal Jazz Ensemble I
MUS4761H	Vocal Jazz Ensemble II
MUS4762H	Vocal Jazz Ensemble III
MUS4763H	Vocal Jazz Ensemble IV
MUS4767H	Instrumental Performance Class Woodwinds II
MUS4770H	Oratorio Ensemble I
MUS4771H	Oratorio Ensemble II
MUS4774H	Schola Cantorum I
MUS4775H	Schola Cantorum II
MUS4776H	Collegium Musicum I
MUS4777H	Collegium Musicum I
MUS4785H	Orchestral Studies I
MUS4786H	Orchestral Studies II
MUS4787H	Instrumental Performance Class Woodwinds
MUS4791H	Instrumental Performance — Guitar
MUS4792H	Instrumental Performance — Guitar II
MUS4795H	Piano/Instrumental I
MUS4796H	Piano/Instrumental II
MUS4800Y	DMA Seminar
MUS4815H	Seminar in Performance Pedagogy
MUS4816H	Researching Performance/Performing Research
MUS4819H	String Pedagogy Practicum
MUS4820H	DMA Study in Masterclass Teaching
MUS4821H	DMA Study in Undergraduate Piano Pedagogy
MUS4822H	DMA Study in Applied Studio Teaching
MUS4823H	Sound and Vision: Techniques in Research-Creation
MUS4838H	Twentieth- and Twenty-First-Century Interpretive Analysis
MUS4844Y	Advanced Applied Music I
MUS4845Y	Advanced Applied Music II
MUS4855Y	DMA Elective Recital
MUS4866Y	DMA Recital I
MUS4877Y	DMA Recital II
MUS4888Y	DMA Recital III
MUS4899H	Research in Performance
MUS4899Y	Research in Performance
MUS4900Y	Operatic Studies I
MUS4901Y	Operatic Studies II
MUS4966Y	Operatic Roles I
MUS4988Y	Operatic Roles II
MUS5700H	Piano Master Class I
MUS5701H	Piano Master Class II
MUS5704H	Instrumental Performance — Violin and Viola I
MUS5705H	Instrumental Performance — Violin and Viola II

Course Code	Course Title
MUS5706H	Instrumental Performance — Violin and Viola III
MUS5714H	Instrumental Performance: Cello-Bass I
MUS5715H	Instrumental Performance: Cello-Bass II
MUS5716H	Instrumental Performance: Cello-Bass III
MUS6666Y	Recital I
MUS7412H	Elementary Improvisation Methods
MUS8888Y	Recital II

Music: Music Performance MMus; Field: Applied Music and Health Courses

Course Code	Course Title
MUS4120H	Clinical Voice Pedagogy
MUS4112Y	Clinical Performance Practicum
MUS4115Y	Principles of Clinical Performance Pedagogy
MUS4165Y	Applied Music for Clinical Practice
MUS4166Y	Performance Project
MUS4188Y	Public Capstone Presentation
MUS7110H	Neurosciences of Music: Scientific Foundations, Clinical Translations
MUS7400H	Introduction to Music and Health Care
MUS7407H	Clinical Research Practicum
MUS7412H	Elementary Improvisation Methods
MUS7415H	Topics in Music and Health Care I
MUS7416H	Topics in Music and Health Care II

Music: Music Performance MMus; Field: Music Technology and Digital Media Courses

Course Code	Course Title
MUS3214H	Music and the Machine
MUS3610H	Music Entrepreneurship: Music and Cities
MUS3611H	Creative Applications of Technology I
MUS3612H	Creative Applications of Technology II
MUS3613H	Musical Acoustics
MUS3614H	Sound Recording I
MUS3615H	Sound Recording II
MUS3616H	Music Mixing and Production
MUS3617H	Production for Multi-Channel Immersive Audio
MUS3618H	Studio Orchestration and Arranging
JDM3619H	Digital Media Distribution
MUS3620H	Technical Ear Training
MUS3621H	Studio Acoustics and Recording Systems
MUS3624H	Topics in Interactive Digital Media and Performance
MUS3630H	Interactive Music and Sound for Video Games
MUS3632H	Video for Intermedia Performance
MUS3666Y	Music Technology and Digital Media Major Project
MUS3805H	Max/MSP
MUS3806H	Computer-Assisted Sound Design and Composition

Near and Middle Eastern Civilizations

NMC: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Near and Middle Eastern Civilizations

MA and PhD

- Fields:
  - Ancient and Near Eastern Studies;
  - Middle Eastern and Islamic Studies

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Book History and Print Culture**
  - Near and Middle Eastern Civilizations, MA, PhD
- **Diaspora and Transnational Studies**
  - Near and Middle Eastern Civilizations, MA, PhD
- **Jewish Studies**
  - Near and Middle Eastern Civilizations, MA, PhD
- **Mediterranean Archaeology**
  - Near and Middle Eastern Civilizations, PhD
- **Sexual Diversity Studies**
  - Near and Middle Eastern Civilizations, MA, PhD
- **Women and Gender Studies**
  - Near and Middle Eastern Civilizations, MA, PhD

Overview

In the Department of Near and Middle Eastern Civilizations, faculty conduct research in the following areas: Egyptology, including archaeology, language, history, and religion; Mesopotamia and the Near East, including archaeology and Assyriology; Syro-Palestinian archaeology; Hebrew and Judaic studies, including Biblical and Rabbinic Hebrew, law, history, religion, and modern Hebrew literature; Aramaic (Ancient, Biblical, Targumic, and Talmudic Aramaic) and Syriac studies, including language, history, religion; Arabic studies; Islamic studies; history of the Islamic world and the modern Middle East; Islamic art; Persian studies; and Turkish studies, including Ottoman language and history.

Contact and Address

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University of Toronto
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NMC: Graduate Faculty

Full Members

Andres Toledo, Miguel Angel - MA, PhD ***(Associate Chair, Graduate)***
Bahoora, Haytham - BA, MA, PhD
Baker, Heather D. - DPhil
Beaulieu, Paul-Alain - BA, LLB, MA, PhD ***(Chair and Graduate Chair)***
Fox, Harry - BA, BSc, MA, MS, PhD
Goebs, Katja - MA, DPhil
Hanssen, Jens - BPhil, DPhil
Harrak, Amir - MA, LTh, PhD
Harrison, Timothy - BA, MA, PhD
Holmstedt, Robert - BA, MA, PhD
Kana'an, Ruba - MPH, MPH, DPhil
Meacham, Tirzah - BA, MA, PhD
Methodieva, Milena - PhD
Metso, Sarianna - MA, PhD
Miller, Jeannie - BA, MA, PhD
Moumtaz, Nada - PhD
Ostapchuk, Victor - BA, PhD
Pouls Wegner, Mary-Ann - BA, PhD
Raffaelli, Enrico - PhD
Razzaque, Arafat - BA, AM, MTh, PhD
Reichel, Clemens - MA, PhD
Saleh, Walid - BA, MA, PhD
Schipper, Jeremy - MDiv, PhD
Subtelny, Maria - BA, PhD
Tavakoli-Targhi, Mohamad - BA, MA, PhD
Virani, Shafique - PhD
Zakar, Adrien - MA, PhD

Members Emeriti

Golombek, Lisa - BA, MA, PhD
Leprohon, Ronald - BA, PhD
Northrup, Linda - BA, MA, PhD
Reilly, James - BA, MA, PhD
Sandler, Rivanne - BA, MA, PhD
Taylor, Glen - BA, MPH, MTh, PhD

Associate Members

Aksan, Virginia - BA, MA, MLS, PhD
Ali, Abdel-Khalig - BA, MA, PhD
Ali, Adam - BA, MA, MA, PhD
Arik, Hulya - BA, MA, PhD

Batiuk, Stephen - BA, MA, PhD
Bozcali, Firat - BA, MA, MA, PhD
Branting, Scott - BA, MA, MA, PhD
Burton, Elise K. - BA, AM, PhD
Daviau, Michele - MTh, PhD
Dost, Suleyman - BA, MA, PhD
Emon, Anver - BA, LLB, LLM, MA, PhD, SJD, CRC
Fadel, Mohammad - BA, JD, PhD
Grzymski, Krzysztof - MA, PhD
Hare, Laura - BA, MTh, PhD
Hojatollah Taleghani, Azita - BA, MA, MA, PhD
Kingston, Paul - BA, MA, MPH, DPhil
Langgut, Dafna - BA, MA, PhD
Mason, Robert - BA, PhD
Mercan, Gozde - BA, MA, PhD
Mittermaier, Amira - MA, PhD
Newman, Judith - PhD
Nizri, Yigal - BFA
Siegel, Oren - BA, PhD
Suleman, Fahmida - BA, MA, PhD
Sunahara, Kay - BA, MA, PhD
Verskin, Sara - AB, AB, PhD, PhD
Welton, Lynn - BA, MA, PhD

NMC: Near and Middle Eastern Civilizations MA

Depending on the amount of undergraduate preparation, students may enrol in either a two-year MA program or a one-year MA program option. Students can complete the MA through a coursework option or a thesis option. The MA program may be taken on a part-time basis.

MA Program (One-Year Coursework Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Near and Middle Eastern Civilizations' additional admission requirements stated below.
- An appropriate bachelor's degree in a relevant program from a recognized university with an average of at least B+, or equivalent, in the final year.
- Two letters of reference.
- Statement of academic intent.
- Some programs may require appropriate knowledge of a primary source language, or one or more European languages.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **3.0 full-course equivalents (FCEs)**. FCEs are selected in consultation with the student's academic advisor and the Associate Chair, Graduate as part of the MA plan of study. At the beginning of their studies, students must submit their proposed MA plan of study to the department for review and approval.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 9 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MA Program (One-Year Thesis Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Near and Middle Eastern Civilizations' additional admission requirements stated below.
- An appropriate bachelor's degree in a relevant program from a recognized university with an average of at least B+, or equivalent, in the final year.
- Two letters of reference.
- Statement of academic intent.
- Some programs may require appropriate knowledge of a primary source language, or one or more European languages.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

- Students must successfully complete the following:
  - a **thesis** (1.0 full-course equivalent [FCE]) under the guidance of a supervisor on a topic approved by the supervisor;
  - 2.0 FCEs in **coursework**. FCEs are selected in consultation with the student's academic advisor and the Associate Chair, Graduate as part of the MA plan of study. At the beginning of their studies, students must submit their proposed MA plan of study to the department for review and approval.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 9 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MA Program (Two-Year Coursework Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Near and Middle Eastern Civilizations' additional admission requirements stated below.
- An appropriate bachelor's degree in a relevant program from a recognized university with an average of at least B+, or equivalent, in the final year.
- Two letters of reference.
- Statement of academic intent.
- Some programs may require appropriate knowledge of a primary source language, or one or more European languages.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **6.0 full-course equivalents (FCEs)**. FCEs are selected in consultation with the student's academic advisor and the Associate Chair, Graduate as part of the MA plan of study. At the beginning of their studies, students must submit their proposed MA plan of study to the department for review and approval.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 18 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MA Program (Two-Year Thesis Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Near and Middle Eastern Civilizations' additional admission requirements stated below.
- An appropriate bachelor's degree in a relevant program from a recognized university with an average of at least B+, or equivalent, in the final year.
- Two letters of reference.
- Statement of academic intent.
- Some programs may require appropriate knowledge of a primary source language, or one or more European languages.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

- Students must successfully complete the following:
  - a **thesis** (1.0 full-course equivalent [FCE]) under the guidance of a supervisor on a topic approved by the supervisor;
  - 5.0 FCEs in **coursework**. FCEs are selected in consultation with the student's academic advisor and the Associate Chair, Graduate as part of the MA plan of study. At the beginning of their studies, students must submit their proposed MA plan of study to the department for review and approval.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 18 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

NMC: Near and Middle Eastern Civilizations PhD

Applicants may enter the PhD program via one of two routes: 1) following completion of an appropriate MA or 2) direct entry following completion of a bachelor's degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Near and Middle Eastern Civilizations' additional admission requirements stated below.
- Admission via one of two routes:
  - MA degree in a relevant program from a recognized university with at least an A– average or equivalent in courses taken for the MA program.
  - Direct entry from a bachelor's degree for exceptionally qualified applicants, at the discretion of the department.
- Ability to conduct independent research.
- Competence in primary source language(s) relevant to the applicant's research.
- Two letters of reference.
- Statement of academic intent.
- Writing sample of no more than 12 double-spaced pages including footnotes.
- Curriculum vitae (CV)/resumé up to three pages in length.

- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

- The program of study is determined in consultation with the department and includes **written and oral general examinations**.
- Each year of the PhD program, students are obligated to consult with their advisor and Graduate Coordinator to see that appropriate coursework is done and that the language requirements are completed on schedule.
- The minimum **course requirement** will normally be **6.0 full-course equivalents (FCEs)**. FCEs are selected in consultation with the student's academic advisor and the Associate Chair, Graduate as part of the PhD plan of study. Students submit their proposed PhD plan of study to the department at the beginning of their studies for review and approval.
  - Year 1: 3.0 FCEs and attend the three designated Year 1 sessions of NMC1030Y *Professional Development Seminar*.
  - Year 2: 3.0 FCEs and attend the three designated Year 2 sessions of NMC1030Y. Completion of NMC1030Y depends upon successful completion of the Year 2 sessions.
- Students who have completed a two-year MA in the department may apply for a course reduction that will be granted at the discretion of the department. The reduction should normally be 1.0 FCE, but may be up to 3.0 FCEs in cases of students who also have an exceptional preparation in their area of study at the BA level. Coursework and all language requirements are to be completed by the end of Year 2.
- In consultation with the supervisor, examining committee, and supervisory committee (if it has already been established), students will prepare a **short draft proposal** of two to four pages with bibliography by May of Year 2. The short draft proposal will direct some of the preparation for the **comprehensive examinations** which will take place by the end of the first session of Year 3. A final proposal of at least 10 pages plus bibliography is to be approved by the supervisory committee within one to two months of the completion of the comprehensive exams.
- Students are required to demonstrate reading comprehension in **two languages** of modern scholarship (typically French and German), the first by the end of Year 1 in residence, and the second by the end of Year 2 of residence. A language other than French or German may be substituted with approval of the Academic Advisor and the Graduate Coordinator. In some cases, the department may require competence in another language relevant to the student's program. The choice of language(s) must be approved by the department. Note that the modern language requirements are in addition to the course requirements and do not count as part of the 6.0 FCEs.
- **Residence**. Students are required to be registered on campus for the period during which coursework requirements are being fulfilled, and in no case for less than two academic years.
- **Thesis**. The thesis must embody the results of original investigation and constitute a significant contribution to knowledge in the field. It must be based on research conducted while registered in the PhD program. The thesis must be successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Near and Middle Eastern Civilizations' additional admission requirements stated below.
- Admission via one of two routes:
  - MA degree in a relevant program from a recognized university with at least an A– average or equivalent in courses taken for the MA program.
  - Direct entry from a bachelor's degree for exceptionally qualified applicants, at the discretion of the department.
- Ability to conduct independent research.
- Competence in primary source language(s) relevant to the applicant's research.
- Two letters of reference.
- Statement of academic intent.
- Writing sample of no more than 12 double-spaced pages including footnotes.
- Curriculum vitae (CV)/resumé up to three pages in length.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

- The program of study is determined in consultation with the department and includes **written and oral general examinations**.
- Each year of the PhD program, students are obligated to consult with their advisor and Graduate Coordinator to see that appropriate coursework is done and that the language requirements are completed on schedule.
- The minimum **course requirement** will normally be **6.0 full-course equivalents (FCEs)**. FCEs are selected in consultation with the student's academic advisor and the Associate Chair, Graduate as part of the PhD plan of study. Students submit their proposed PhD plan of study to the department at the beginning of their studies for review and approval.
  - Year 1: 3.0 FCEs and attend the three designated Year 1 sessions of NMC1030Y *Professional Development Seminar*.

    - Year 2: 3.0 FCEs and attend the three designated Year 2 sessions of NMC1030Y. Completion of NMC1030Y depends upon successful completion of the Year 2 sessions.
- Students who have completed a two-year MA in the department may apply for a course reduction that will be granted at the discretion of the department. The reduction should normally be 1.0 FCE, but may be up to 3.0 FCEs in cases of students who also have an exceptional preparation in their area of study at the BA level. Coursework and all language requirements are to be completed by the end of Year 2.
- In consultation with the supervisor, examining committee, and supervisory committee (if it has already been established), students will prepare a **short draft proposal** of two to four pages with bibliography by May of Year 2. The short draft proposal will direct some of the preparation for the **comprehensive examinations** which will take place by the end of the first session of Year 3. A final proposal of at least 10 pages plus bibliography is to be approved by the supervisory committee within one to two months of the completion of the comprehensive exams.
- Students are required to demonstrate reading comprehension in **two languages** of modern scholarship (typically French and German), the first by the end of Year 1 in residence, and the second by the end of Year 2 of residence. A language other than French or German may be substituted with approval of the Academic Advisor and the Graduate Coordinator. In some cases, the department may require competence in another language relevant to the student's program. The choice of language(s) must be approved by the department. Note that the modern language requirements are in addition to the course requirements and do not count as part of the 6.0 FCEs.
- **Residence**. Students are required to be registered on campus for the period during which coursework requirements are being fulfilled, and in no case for less than two academic years.
- **Thesis**. The thesis must embody the results of original investigation and constitute a significant contribution to knowledge in the field. It must be based on research conducted while registered in the PhD program. The thesis must be successfully defended at a Final Oral Examination.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

NMC: Near and Middle Eastern Civilizations MA, PhD Courses

Arabic Studies

Course Code	Course Title
NMC2055H	The Qur'an and Its Interpretation
NMC2056H	Readings in Qur'an and Tafsir
NMC2057H	Arabic Commentary Tradition on the Poetry of al-Mutanabbi
NMC2100Y	Elementary Standard Arabic
NMC2101Y	Intermediate Standard Arabic I
NMC2102Y	Intermediate Standard Arabic II
NMC2103Y	Advanced Standard Arabic
NMC2110H	Al-Jahiz and His Debate Partners
NMC2117H	Readings in Medieval Arabic Chronicles
NMC2130H	Adab and Arabic Literary Prose
NMC2131H	Premodern Arabic Poetry
NMC2160H	Hadith and the Study of Traditions in Islamic History

Aramaic-Syriac Studies

Course Code	Course Title
NMC1100Y	Biblical Aramaic
NMC1101Y	Classical Syriac
NMC1102Y	Western Aramaic — Jerusalem Talmud
NMC1105Y	Syriac Historical Texts
NMC1106Y	Syriac Exegetical Texts
NMC1110H	Targum — Aramaic Bible Translations
NMC1111Y	Eastern Aramaic — Babylonian Talmud

Archaeology

Course Code	Course Title
NMC1402H	Topics in Egyptian Archaeology
NMC1406Y	Problems in the Archaeology of Bronze Age Syria-Palestine
NMC1408Y	Seminar in the Archaeology of Syria-Palestine
NMC1409H	Archaeology and Material Culture of Ancient Egypt I
NMC1410H	Archaeology and Material Culture of Ancient Egypt II
NMC1411H	Near Eastern Ceramics I
NMC1412H	Near Eastern Ceramics II
NMC1413H	Archaeology of Mesopotamia I: Rise of Civilization

Course Code	Course Title
NMC1414H	Egyptian Artifacts
NMC1415H	Archaeology of Mesopotamia II: States and Empires
NMC1416H	Egyptian Iconography
NMC1418Y	Archaeology of Nubia
NMC1419Y	Art, Archaeology, and Culture of Egypt in the Age of the Pyramids
NMC1421H	Seminar in Egyptian Archaeology I
NMC1422H	Seminar in Egyptian Archaeology II
NMC1425H	Mesopotamian Material Culture — Art versus Artifact
NMC1426H	Sacred versus Secular Space: Mesopotamian Architecture in Context
NMC1427H	Archaeology of State Societies
NMC1428H	The Archaeology of Sumer
NMC1429Y	Polarized-Light Microscopy in Archaeology
NMC1430H	Warfare — The Archaeology of Conflict
NMC1431H	The Archaeology of Death
NMC1432H	The History and Archaeology of the Horn of Africa and South Arabia
NMC1435H	The Archaeology of Borders in Egypt and the Near East
NMC1613H	Religion in the Ancient Near East
NMC2541Y	Medieval Middle Eastern Ceramics

Assyriology and History of the Ancient Near East

Course Code	Course Title
NMC1001Y	Introduction to Akkadian
NMC1002Y	Selected Standard Babylonian Texts
NMC1003H	Assyrian Historical Texts
NMC1004Y	Intermediate Sumerian
NMC1005Y	The Assyrian Language
NMC1008H	Babylonian Archival Texts — 2nd Millennium BC
NMC1009Y	Introduction to Sumerian
NMC1010H	Mesopotamian Society and Economy
NMC1011H	Babylonian Historical Texts
NMC1012H	Babylonian Archival Texts — 1st Millennium BC
NMC1020H	Ancient Mesopotamia I: Sumerians and Akkadians
NMC1021H	Ancient Mesopotamia II: Assyrians and Babylonians
NMC1022H	The Babylonian City
NMC1023H	The Neo-Assyrian Empire
NMC1613H	Religion in the Ancient Near East

Egyptology

Course Code	Course Title
NMC1201Y	Introduction to Middle Egyptian
NMC1202Y	Intermediate Middle Egyptian
NMC1203Y	Late Egyptian Texts
NMC1204Y	Cursive Scripts
NMC1209H	Old Egyptian Texts
NMC1210H	Ancient Egyptian Historical Texts
NMC1213H	Ancient Egyptian Religious and Funerary Texts
NMC1402H	Topics in Egyptian Archaeology
NMC1409H	Archaeology and Material Culture of Ancient Egypt I
NMC1410H	Archaeology and Material Culture of Ancient Egypt II
NMC1414H	Egyptian Artifacts
NMC1416H	Egyptian Iconography
NMC1418Y	Archaeology of Nubia
NMC1419Y	Art, Archaeology, and Culture of Egypt in the Age of the Pyramids
NMC1421H	Seminar in Egyptian Archaeology I
NMC1422H	Seminar in Egyptian Archaeology II
NMC1435H	The Archaeology of Borders in Egypt and the Near East

Hebrew and Judaic Studies

Course Code	Course Title
NMC1102Y	Western Aramaic — Jerusalem Talmud
NMC1110H	Targum — Aramaic Bible Translations
NMC1111Y	Eastern Aramaic — Babylonian Talmud

Course Code	Course Title
NMC1301Y	Introductory Biblical Hebrew
NMC1302H	Intermediate Biblical Hebrew I
NMC1303H	Intermediate Biblical Hebrew II
NMC1305H	Early Hebrew Epigraphy
NMC1306H	Scribes, Manuscripts, and Translations of the Hebrew Bible
NMC1307H	History of Ancient Israel
NMC1308H	Readings in Hebrew Bible
NMC1310H	Readings in Second Temple Period Texts
NMC1313H	Mishnah and Tosefta
NMC1314H	Law in Ancient Judaism
NMC1315H	Advanced Readings in the Dead Sea Scrolls
NMC1316H	Modern Hebrew Poetry
NMC1317H	Modern Hebrew Prose
NMC1318H	Halakhic Midrashim
NMC1327H	Themes in Midrashic Literature
NMC1328H	Intertextuality: Tannaitic and Amoraic Literature
NMC1330H	Introduction to Modern Hebrew I
NMC1331H	Introduction to Modern Hebrew II
NMC1332H	Intermediate Modern Hebrew I
NMC1333H	Intermediate Modern Hebrew II
NMC1334H	Advanced Modern Hebrew I
NMC1335H	Advanced Modern Hebrew II
NMC1607H	Life Cycle and Personal Status Issues in Jewish Law
NMC1608H	Gender Issues in Jewish Law
NMC1654H	Advanced Biblical Hebrew

History of the Islamic World and the Modern Middle East

Course Code	Course Title
NMC2080H	Theory and Method in Middle Eastern Studies
NMC2081H	Anthropology of the Middle East
NMC2085H	Methods in Medieval Middle East History
NMC2117H	Readings in Medieval Arabic Chronicles
NMC2160H	Hadith and the Study of Traditions in Islamic History
NMC2170H	Topics in Modern Arab History I
NMC2171H	Topics in Modern Arab History II
NMC2172H	The Politics of Archaeology in the Modern Middle East
NMC2173H	Intellectuals of the Modern Arab World
NMC2180H	Iranian Modernity
NMC2226H	Medieval Persian Historiography and Diplomatics
NMC2233H	History of Late Antique and Early Islamic Iran
NMC2234H	Safavid Iran: Reign of the Shahs
NMC2311H	The Rise of the Ottomans
NMC2312H	The Ottoman Empire in its Classical Age
NMC2313H	History of the Late Ottoman Empire
NMC2315Y	Topics in Ottoman History
NMC2320H	Modern Turkey
NMC2345Y	The Steppe Frontier in Eurasian and Islamic History
NMC2350H	Capital, Technology, and Utopia in the Modern Middle East
NMC2351H	Mapping the Ottoman World
NMC2541Y	Medieval Middle Eastern Ceramics

Islamic Art and Material Culture

Course Code	Course Title
NMC2129H	Introduction to Islamicate Codicology
NMC2530H	New Approaches to 'Islamic Art'
NMC2531H	The Mosque: Readings in Architecture, Law, and Authority in Muslim Context
NMC2541Y	Medieval Middle Eastern Ceramics

Other Near and Middle Eastern Languages

Course Code	Course Title
NMC1651H	Phoenician and Punic Epigraphy
NMC1652H	Ugaritic
NMC1653H	Ancient Ethiopic Inscriptions
NMC1655H	Comparative Semitics

Persian and Iranian Studies

Course Code	Course Title
NMC2200Y	Introductory Persian
NMC2201Y	Intermediate Persian
NMC2202H	Modern Persian Poetry
NMC2203H	Structural Development of Iranian Languages
NMC2204Y	Avestan
NMC2205Y	Middle Persian (Pahlavi)
NMC2206H	Old Persian
NMC2207H	Advanced Persian I
NMC2208H	Advanced Persian II
NMC2219H	Persian Literature: The Epic Tradition
NMC2220H	Persian Literature: Ethical, Erotic, Mystical
NMC2221H	Persian Mirrors for Princes
NMC2223H	The Persian Manuscript Tradition
NMC2224H	The Visionary Tales of Suhravardi, Master of Illuminationist Philosophy
NMC2227H	Zoroastrian Cosmic History: From Genesis to Universal Judgment
NMC2228H	Zoroastrian Apocalyptic Literature: To the Netherworld and Beyond
NMC2229H	Persians, Greeks, and Romans: Friendly Enemies
NMC2230H	The First World Empire: The Achaemenids
NMC2231H	Religions of the Sasanian Empire
NMC2234H	Safavid Iran: Reign of the Shahs

Religious Cultures of the Near and Middle East

Course Code	Course Title
NMC1102Y	Western Aramaic — Jerusalem Talmud
NMC1110H	Targum — Aramaic Bible Translations
NMC1111Y	Eastern Aramaic — Babylonian Talmud
NMC1313H	Mishnah and Tosefta
NMC1314H	Law in Ancient Judaism
NMC1315H	Advanced Readings in the Dead Sea Scrolls
NMC1318H	Halakhic Midrashim
NMC1327H	Themes in Midrashic Literature
NMC1328H	Intertextuality: Tannaitic and Amoraic Literature
NMC1613H	Religion in the Ancient Near East
NMC2055H	The Qur'an and Its Interpretation
NMC2056H	Readings in Qur'an and Tafsir
NMC2160H	Hadith and the Study of Traditions in Islamic History
NMC2227H	Zoroastrian Cosmic History: From Genesis to Universal Judgment
NMC2228H	Zoroastrian Apocalyptic Literature: To the Netherworld and Beyond
NMC2231H	Religions of the Sasanian Empire

Turkish and Ottoman Studies

Course Code	Course Title
NMC2300Y	Introductory Turkish
NMC2301Y	Intermediate Turkish
NMC2302Y	Advanced Turkish (with Introduction to Ottoman Turkish)
NMC2311H	The Rise of the Ottomans
NMC2312H	The Ottoman Empire in its Classical Age
NMC2313H	History of the Late Ottoman Empire
NMC2315Y	Topics in Ottoman History
NMC2320H	Modern Turkey
NMC2330Y	Readings in Ottoman Historical Texts
NMC2331Y	Ottoman Palaeography and Diplomatics
NMC2345Y	The Steppe Frontier in Eurasian and Islamic History
NMC2351H	Mapping the Ottoman World

Other Courses

Course Code	Course Title
NMC1030Y	Professional Development Seminar
NMC2000H	Directed Reading
NMC2000Y	Directed Reading
NMC2001H	Directed Reading and Research
NMC2001Y	Directed Reading and Research

Course Code	Course Title
NMC2002H	Topics in Near and Middle Eastern Civilizations
NMC2002Y	Topics in Near and Middle Eastern Civilizations
NMC2003H	Topics in Near and Middle Eastern Civilizations
NMC2003Y	Topics in Near and Middle Eastern Civilizations
NMC2004H	Directed Research in Museum Materials
NMC2075H	Introduction to Graduate Research

Nursing Science

Nursing Science: Introduction

Faculty Affiliation

Nursing

Degree Programs

Nursing Science

MN

- Fields:
  - Clinical Nursing;
  - Health Systems Leadership and Administration;
  - Nurse Practitioner

DN

PhD

Diploma Programs

Post-Master's Nurse Practitioner (PMNP)

DipNP

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Addiction Studies**
  - Nursing Science, PhD
- **Aging, Palliative and Supportive Care Across the Life Course**
  - Nursing Science, MN, PhD
- **Bioethics** (admissions have been administratively suspended)
  - Nursing Science, MN, PhD
- **Global Health (U of T Global Scholar)**
  - Nursing Science, MN, PhD
- **Resuscitation Sciences** (admissions have been administratively suspended)
  - Nursing Science, MN, PhD
- **Women's Health**
  - Nursing Science, MN, PhD

Overview

The Lawrence Bloomberg Faculty of Nursing is committed to student-centred learning that encompasses the principles of empowerment, engagement, discovery, diversity, equity, and knowledge transformation for nursing practice.

Students have opportunities to engage with expert clinicians, scientists, and theorists and have access to a variety of interprofessional and interdisciplinary experiences with other health profession Faculties, the University, and community partners. These resources enable students to develop their intellectual capacity; their research, critical thinking, judgment abilities; and skills required to be exemplar nurses, advanced practice nurses, leaders, scientists, scholars, and educators.

Contact and Address

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Graduate Department of Nursing Science
University of Toronto
Suite 130, 155 College Street
Toronto, Ontario M5T 1P8
Canada

Nursing Science: Graduate Faculty

Full Members

Chu, Charlene - BSc, BScN, MN, PhD
Cleverley, Kristin - BN, MSN, PhD
Colella, Tracey J.F. - MSc, PhD
Cranley, Lisa - BScN, MN, PhD
Dale, Craig - BSc, PhD
Dennis, Cindy-Lee - BScN, MSN, PhD
Gastaldo, Denise - BSN, MA, PhD
Grundy, Quinn - BScN, PhD
Hillan, Edith - MPH, MSc, PhD
Jibb, Lindsay - PhD
Johnston, Linda - BSc, PhD
Mayo, Samantha - BSc, MN, PhD
McGillis, Linda - BHA, MSN, PhD
McGilton, Kathy - BScN, MN, PhD
Metcalfe, Kelly - BNSc, PhD ***(Associate Dean, Research and External Relations until December 31, 2024)***
Muntaner, Carles - MHSc, MD, PhD
Nelson, Sioban - PhD
Parry, Monica - BScN, MEd, MSc, PhD
Peter-Hardtke, Elizabeth - BA, BSN, MSN, PhD
Puts, Martine - BN, MHSc, PhD
Stinson, Jennifer - BScN, MSc, PhD
Stremler, Robyn - BSc, MASc, PhD, RN ***(Dean and Associate Dean, Academic)***
Widger, Kimberley - BScN, MN, PhD ***(Interim Associate Dean, Academic)***

Members Emeriti

Donner, Gail - PhD
Pringle, Dorothy - BScN, MS, PhD
Stevens, Bonnie - BSc, MSN, PhD
Tourangeau, Ann - BScN, MN, PhD

Associate Members

Acorn, Michelle - BSN, MN, PhD
Chenier-Hogan, Nicole - MSc
Chernenko, Susan - BN, MN
Conway, Aaron - PhD
Firestone, Michelle - BSc, MHSc, PhD
Fitch, Margaret - BSN, MSN, PhD
Innis, Jennifer - BN, MA, MA, MA, MA, PhD, PhD
Janes, Nadine - BScN, MSc, PhD
Ling, Sara - BN, BScN, PhD
Louis, Joanne - BSN, MS, MN
Maze, Dawn - MSc, DrMed
Mednikov Shcharinsky, Alina - MN
Mohammed, Shan - BScN, BSc, MN, PhD
Orava, Brianna - PhD
Price, Jennifer - AB, BNSc, MSN, PhD
Rea, Elizabeth - MSc, MD
Salami, Kolawole, Bukola - MSN
Stephenson, Anne - MD
Thomson, Heather - BN, MN, PhD
Velonis, Alisa Joy - PhD
Wilson, Jean - BScN, MHSc
Wong, David - MD
Yakong, Vida - PhD
Yee, Karen - MSc, MDCM

Nursing Science: Nursing Science MN

The **Master of Nursing (MN) program** prepares advanced nurses with specialized knowledge, skills, and expertise in a defined area of nursing. The program offers three fields: Clinical Nursing; Health Systems Leadership and Administration; and Nurse Practitioner.

Nursing Science: Nursing Science MN; Field: Clinical Nursing

MN Program; Field: Clinical Nursing

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Nursing Science's additional admission requirements stated below.
- Applicants must have a BScN degree (a BN or BSN or BNSc is considered equivalent) and have obtained at least a mid-B (75% or 3.0 grade point average) standing in the final year of undergraduate study. In addition, applicants must have obtained at least a B standing in their next-to-final year.
- Applicants must submit official university transcripts; a curriculum vitae; two letters of reference; and a letter of intent outlining goals and expectations that clearly indicate the intended field of study. Candidates must submit proof of current nurse registration, or they must be eligible for registration.
- For further information about applying, please email connect.nursing@utoronto.ca or visit the website.

Completion Requirements

- To qualify for the degree, students shall complete a program of study outlined by the Graduate Department of Nursing Science.
- **Coursework.** The MN program requires **5.0 full-course equivalents (FCEs)** as follows:
  - 3.0 FCEs:
    - NUR1170H *Introduction to Advanced Practice Nursing*
    - NUR1171H *Topics in Advanced Practice Nursing*
    - NUR1174H *Research Design, Appraisal, and Utilization: Clinical*
    - NUR1175H *Introduction to Qualitative Research: Methodologies, Appraisal, and Knowledge Translation: Clinical*
    - NUR1176H *History of Ideas in Nursing Practice: Clinical*
    - NUR1177H *Program Planning and Evaluation in Nursing: Clinical*.
  - A 1.0 FCE practicum-based course (NUR1179Y *Advanced Nursing Practice Scholarship: Clinical*), which should be taken alone in the final session and only after completion of all other coursework and program requirements.
  - Two elective field of study courses (1.0 FCE). One of these two field of study courses may be selected from outside the Faculty of Nursing.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Nursing Science: Nursing Science MN; Field: Health Systems Leadership and Administration

MN Program; Field: Health Systems Leadership and Administration

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also

satisfy the Graduate Department of Nursing Science's additional admission requirements stated below.
- Applicants must have a BScN degree (a BN or BSN or BNSc is considered equivalent) and have obtained at least a mid-B (75% or 3.0 grade point average) standing in the final year of undergraduate study. In addition, applicants must have obtained at least a B standing in their next-to-final year.
- Applicants must submit official university transcripts; a curriculum vitae; two letters of reference; and a letter of intent outlining goals and expectations that clearly indicate the intended field of study. Candidates must submit proof of current nurse registration, or they must be eligible for registration.
- In addition to the above requirements, applicants seeking admission to this field of study must have a minimum of 3,900 hours of Registered Nurse experience (equivalent to two years of full-time experience) by August 15 in order to begin the program in September (clinical placements in the BScN program cannot be counted).
- For further information about applying, please email connect.nursing@utoronto.ca or visit the Nursing website.

Completion Requirements

- To qualify for the degree, students shall complete a program of study outlined by the Graduate Department of Nursing Science.
- **Coursework.** The MN program requires **5.0 full-course equivalents (FCEs)** including:
  - 4.0 FCEs:
    - NUR1016H *Health Systems, Policy, and the Profession*
    - NUR1027H *Integrated Approaches to Research Appraisal and Utilization Part 1*
    - NUR1127H *Integrated Approaches to Research Appraisal and Utilization Part 2*
    - NUR1151H *Theories and Concepts in Nursing Leadership and Administration*
    - NUR1152H *Leading and Managing Effective Health Care Teams*
    - NUR1156H *History of Ideas in Nursing Practice: Health Systems Leadership and Administration*
    - NUR1157H *Program Planning and Evaluation in Nursing: Health Systems Leadership and Administration*
    - NUR1161H *Advanced Concepts in Leadership and Administration*
  - A 1.0 FCE practicum-based course (NUR1169Y *Advanced Nursing Practice Scholarship: Health Systems Leadership and Administration*), which should be taken alone in the final session and only after completion of all other coursework and program requirements.
- This field of study is offered in a hybrid learning format including online and required on-campus, in-class learning. There are two required on-campus learning periods: one embedded in NUR1151H in Year 1 and the second embedded in NUR1169Y in Year 2. Courses are prescribed and normally students progress through the program within a defined student cohort. Normally, successful completion of Year 1 courses is required for students to enter Year 2 of their program.
- **Year 1** course sequencing:
  - Fall — NUR1156H and NUR1027H
  - Winter — NUR1127H and NUR1151H*
  - Summer — NUR1152H*
- **Year 2** course sequencing:
  - Fall — NUR1016H and NUR1161H
  - Winter — NUR1157H
  - Summer — NUR1169Y*
- *NUR1151H and NUR1169Y both include a required on-campus, in-class learning experience. NUR1152H and NUR1169Y include a required practicum component and required eLearning activities.

Mode of Delivery: Hybrid
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Nursing Science: Nursing Science MN; Field: Nurse Practitioner

This field of study is offered in a hybrid learning format including online and required on-campus, in-class learning.

MN Program; Field: Nurse Practitioner

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Nursing Science's additional admission requirements stated below.
- Applicants must have a BScN degree (a BN or BSN or BNSc is considered equivalent) and have obtained at least a mid-B (75% or 3.0 grade point average) standing in the final year of undergraduate study. In addition, applicants must have obtained at least a B standing in their next-to-final year.
- Applicants must submit official university transcripts; a curriculum vitae; two letters of reference; and a letter of intent outlining goals and expectations that clearly indicate the intended field of study. Candidates must submit proof of current nurse registration, or they must be eligible for registration.
- In addition to the above requirements, applicants seeking admission to this field of study must have a minimum of 3,900 hours of Registered Nurse experience (equivalent to two years of full-time experience) by August 15 in order to begin the program in September (clinical placements in the BScN program cannot be counted).
- For further information about applying, please email connect.nursing@utoronto.ca or visit the Nursing website.

Completion Requirements

- To qualify for the degree, students shall complete a program of study outlined by the Graduate Department of Nursing Science.
- **Coursework.** Students must successfully complete a total of **5.5 full-course equivalents (FCEs)** as follows:
  - NUR1094H *Research Design, Appraisal, and Utilization: Nurse Practitioner*

    - NUR1095H *Introduction to Qualitative Research: Methodologies, Appraisal, and Knowledge Translation: Nurse Practitioner*
    - NUR1097H *Program Planning and Evaluation in Nursing: Nurse Practitioner*
    - NUR1138H *Global Health Topics for Nurse Practitioners*
    - NUR1401H *Pathophysiology and Pharmacotherapeutics 1*
    - NUR1402H *Pathophysiology and Pharmacotherapeutics 2*
    - NUR1403H *Advanced Health Assessment and Clinical Reasoning*
    - NURxxxxH* *Advanced Health Assessment and Therapeutic Management 1*
    - NURxxxxH* *Advanced Health Assessment and Therapeutic Management 2*
    - NURxxxxY* *Nurse Practitioner Professional Roles, Leadership, and Responsibilities*, which must be taken alone in the final session and only after completion of all other coursework and program requirements.

* Course code to be confirmed pending approval.

Mode of Delivery: Hybrid
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Nursing Science: Nursing Science DN

The **Doctor of Nursing (DN)** is a professional doctoral program designed to prepare nurses with the required skills to apply knowledge in diverse settings and (a) lead in dynamic, fast-paced, technologically advanced and sophisticated health-care environments and (b) teach in nursing education. Students will engage in advanced education related to leadership and knowledge application in health-care or nursing education.

The DN is offered in a hybrid online (required courses) and on-site (required residencies) delivery model. Students will normally complete this full-time program in eight sessions compressed over three years due to cohort-based delivery and extensive use of the Summer sessions.

DN Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Nursing Science's additional admission requirements stated below.
- Applicants must have a master's degree in nursing or a closely related field, such as education, public health, health science, health policy, or business administration, with a minimum B+ standing from a recognized university.
- Applicants must hold current registration as a Registered Nurse and must have a minimum of two years of relevant health-care leadership experience or advanced nursing education teaching experience.
- Applicants must provide three reference letters: two work-related and one academic.
- Applicants must submit a letter of intent outlining their reasons for applying to the program and a proposed thesis project.
- Applicants whose primary language is not English and who have graduated from a university where the primary language of instruction and examination is not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements. An interview may be required.

Completion Requirements

- Students must successfully complete a total of **5.0 full-course equivalents (FCEs)** as follows:
    - coursework (4.0 FCEs):
        - 1.5 required FCEs:
            - NUR1301H *Leadership: Health Services and Education*
            - NUR1302H *Implementation Science: Health Services and Education*
            - NUR1303H *Policy and Politics in Nursing Practice and Education*
        - 0.5 elective FCE relevant to the student's focus, chosen from:
            - NUR1331H *Analysis and Application of Individual and Population Health Data*
            - NUR1332H *Informatics and Technologies for Practice Advancement*
            - NUR1333H *Equity and Ethics in Healthcare Leadership*
            - NUR1334H *Quality Improvement, Safety, and Evaluation Science*
            - NUR1335H *The Scholarship of Teaching and Learning in Healthcare Practice and Education*
        - 2.0 FCEs in seminar courses:
            - NUR1311H *DN Seminar 1*
            - NUR1312H *DN Seminar 2*
            - NUR1313H *DN Seminar 3*
            - NUR1314H *DN Seminar 4*.
    - internships (1.0 FCE):
        - NUR1398H *DN Internship 1* normally completed in the Summer session of Year 1.
        - NUR1399H *DN Internship 2* normally completed in the Fall session of Year 2.
- **Residencies.** Students must complete three residencies consisting of intensive on-campus sessions lasting three to five days each.
- **Literature Review Paper.** The literature review paper topic and objectives/questions must be approved by the supervisor (with signed documentation by the student and supervisor on the DN Student Milestones Tracking Sheet) by November 30 of Year 1.
    - The literature review paper must be submitted by April 30 of Year 1. The submitted literature review paper will be formally reviewed and evaluated by the supervisor and at least one additional thesis committee member. Written and verbal feedback about the submitted literature review paper will be provided to the student at a supervisory committee meeting. For the literature review paper to be considered a pass, both faculty members' assessments of the literature review paper must be at the **successful completion** or **pass level**. If both assessments are considered pass, the student will

receive a **satisfactory** rating at their supervisory committee meeting. If one or both paper reviews are rated **failure** or **not pass**, then the student receives an **unsatisfactory** rating at the supervisory committee meeting.
    - If the student does not successfully complete the literature review paper first submitted, the student will have one additional opportunity to revise and rewrite the literature review paper, based on the feedback received at the supervisory committee meeting. The student must resubmit the revised literature review paper by June 30 of Year 1. This revised literature review paper must be formally evaluated by the supervisor and one other thesis committee member (normally the same committee member who completed the assessment of the original literature review paper). The student will receive feedback about the revised literature review paper at a supervisory committee meeting. For the literature review to be considered a pass, both faculty members' assessments of the literature review must be at the **pass** level. If both assessments are considered pass, the student will receive a **satisfactory** rating at their supervisory committee meeting. If one or both paper reviews are rated **failure** or **not pass**, then the student receives an **unsatisfactory** rating at the supervisory committee meeting.
    - If the student does not successfully complete the literature review paper on the second attempt, the Faculty of Nursing will normally recommend to SGS that the student's registration in the DN program be terminated.
- **Thesis.** Students must complete a written thesis proposal by the end of the fifth session (Year 2). The thesis requires students to identify and investigate a practice problem, articulate and apply theory and evidence to the problem, design strategies for action to address the problem, report on strategies implemented to address the problem, and discuss the results and knowledge dissemination plan.
- **Doctoral Final Oral Examination (FOE).** Students must complete an FOE of the thesis by the end of the final session in Year 3. The FOE will be conducted in accordance with the SGS Final Oral Examination Guidelines.

Mode of Delivery: Hybrid
Program Length: 4 years full-time
Time Limit: 6 years full-time

Nursing Science: Nursing Science PhD

The full-time PhD program prepares scientists with the required analytical and research skills to study nursing, health systems, or other related problems.

Applicants may enter the PhD program via one of two routes: 1) following completion of an appropriate master's degree; or 2) transfer from the University of Toronto MN program.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies.
- Applicants must also satisfy the Graduate Department of Nursing Science's additional admission requirements stated below. Applicants must have a master's degree or its equivalent in nursing or related field with at least a B+ standing from a recognized university.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- For further information about admissions, please contact the Graduate Department of Nursing Science.

Completion Requirements

Courses

Successful completion of **all required** courses by the end of Year 2 in the program.

- Students must successfully complete a **minimum of 3.0 full-course equivalents (FCEs)** that include:
    - PhD Seminar (1.0 FCE):
        - NUR1081H. Students attend the seminar biweekly for the Fall and Winter of Year 1.
        - NUR1082H. Students attend the seminar weekly for the Fall and Winter of Year 2.
    - Research methods course NUR1079Y *Research Methods for Knowledge Discovery*
    - one course (0.5 FCE) related to the substantive area of study and thesis plans
    - one course (0.5 FCE) may be either a method or substantive area course as determined by the student and the supervisory committee.
- Students must attain a minimum average standing at the B+ level for required courses.
- Students are normally expected to complete all required courses (3.0 FCEs) by the end of Year 2. If all required courses are not successfully completed (with a minimum average standing at the B+ level) by the end of Year 3, the Faculty of Nursing will normally make a recommendation to SGS for termination of registration.

Literature Review Paper

Successful completion of the literature review paper.

- The literature review paper topic as well as type and format of the literature review paper must be approved by the supervisor (with signed documentation by the student and supervisor on the PhD Student Milestones Tracking Sheet) by March 1 of Year 1.
- The literature review paper must be submitted by September 30 of Year 2. The submitted literature review paper will be formally reviewed and evaluated by the supervisor and at least one additional thesis committee member. Written and verbal feedback about the submitted literature review paper will be provided to the student at a supervisory committee meeting.

For the literature review paper to be considered a pass, both faculty members' assessments of the literature review paper must be at the **successful completion** or **pass level**. If both assessments are considered pass, the student will receive either a **satisfactory** rating at their supervisory committee meeting. If one or both paper reviews are rated **failure** or **not pass**, then the student receives an **unsatisfactory** rating at the supervisory committee meeting.

- If the student does not successfully complete the literature review paper first submitted, the student will have one additional opportunity to revise and rewrite the literature review paper, based on the feedback received at the supervisory committee. The student must resubmit the revised literature review paper by December 1 of Year 2. This revised literature review paper must be formally evaluated by the supervisor and one other thesis committee member (normally the same committee member who completed the assessment of the original literature review paper). The student will receive feedback about the revised literature review paper at a supervisory committee meeting. For the literature review to be considered a pass, both faculty members' assessments of the literature review must be at the **pass** level. If both assessments are considered pass, the student will receive a **satisfactory** rating at their supervisory committee meeting. If one or both paper reviews are rated **failure** or **not pass**, then the student receives an **unsatisfactory** rating at the supervisory committee meeting.
- If the student does not successfully complete the literature review paper on the second attempt, the Faculty of Nursing will normally recommend to SGS that the student's registration in the PhD program be terminated.

Thesis Proposal

Successful defence of the thesis proposal, normally by the end of Year 2.

- Students are normally expected to defend their thesis proposal by the end of Year 2 of their program. Students must successfully defend their thesis proposal no later than the end of Year 3. The format of the proposal will be similar to that of a modified tri-council grant application. Assessment of the thesis proposal consists of both the written proposal and the oral defence of the proposal. Students who do not successfully defend the proposal after the first attempt may have one additional opportunity to successfully present and defend the written proposal, and this must be accomplished before the end of Year 3 of the program.
- If the student does not successfully defend the thesis proposal by the end of Year 3 (including a second attempt, if required), the Faculty of Nursing will recommend to SGS that the student's registration in the PhD program be terminated.
- The student's dissertation will be defended in the Doctoral Final Oral Examination of the School of Graduate Studies.

Doctoral Final Oral Examination (FOE). Students must complete an FOE of the thesis by the end of the final session in Year 4. The FOE will be conducted in accordance with the SGS Final Oral Examination Guidelines.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies.
- Applicants must also satisfy the Graduate Department of Nursing Science's additional admission requirements stated below. Applicants must have a master's degree or its equivalent in nursing or related field with at least a B+ standing from a recognized university.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- For further information about admissions, please contact the Graduate Department of Nursing Science.

Completion Requirements

Courses

Successful completion of **all required** courses by the end of Year 2 in the program.

- Students must successfully complete a **minimum of 3.0 full-course equivalents (FCEs)** that include:
  - PhD Seminar (1.0 FCE):
    - NUR1081H. Students attend the seminar biweekly for the Fall and Winter of Year 1.
    - NUR1082H. Students attend the seminar weekly for the Fall and Winter of Year 2.
  - Research methods course NUR1079Y *Research Methods for Knowledge Discovery*
  - one course (0.5 FCE) related to the substantive area of study and thesis plans
  - one course (0.5 FCE) may be either a method or substantive area course as determined by the student and the supervisory committee.
- Students must attain a minimum average standing at the B+ level for required courses.
- Students are normally expected to complete all required courses (3.0 FCEs) by the end of Year 2. If all required courses are not successfully completed (with a minimum average standing at the B+ level) by the end of Year 3, the Faculty of Nursing will normally make a recommendation to SGS for termination of registration.

Literature Review Paper

Successful completion of the literature review paper.

- The literature review paper topic as well as type and format of the literature review paper must be approved by the supervisor (with signed documentation by the student and supervisor on the PhD Student Milestones Tracking Sheet) by March 1 of Year 1.

- The literature review paper must be submitted by September 30 of Year 2. The submitted literature review paper will be formally reviewed and evaluated by the supervisor and at least one additional thesis committee member. Written and verbal feedback about the submitted literature review paper will be provided to the student at a supervisory committee meeting. For the literature review paper to be considered a pass, both faculty members' assessments of the literature review paper must be at the **successful completion** or **pass level**. If both assessments are considered pass, the student will receive either a **satisfactory** rating at their supervisory committee meeting. If one or both paper reviews are rated **failure** or **not pass**, then the student receives an **unsatisfactory** rating at the supervisory committee meeting.
- If the student does not successfully complete the literature review paper first submitted, the student will have one additional opportunity to revise and rewrite the literature review paper, based on the feedback received at the supervisory committee. The student must resubmit the revised literature review paper by December 1 of Year 2. This revised literature review paper must be formally evaluated by the supervisor and one other thesis committee member (normally the same committee member who completed the assessment of the original literature review paper). The student will receive feedback about the revised literature review paper at a supervisory committee meeting. For the literature review to be considered a pass, both faculty members' assessments of the literature review must be at the **pass** level. If both assessments are considered pass, the student will receive a **satisfactory** rating at their supervisory committee meeting. If one or both paper reviews are rated **failure** or **not pass**, then the student receives an **unsatisfactory** rating at the supervisory committee meeting.
- If the student does not successfully complete the literature review paper on the second attempt, the Faculty of Nursing will normally recommend to SGS that the student's registration in the PhD program be terminated.

Thesis Proposal

Successful defence of the thesis proposal, normally by the end of Year 3.

- Students are normally expected to defend their thesis proposal by the end of Year 3 of their program. Students must successfully defend their thesis proposal no later than the end of Year 4. The format of the proposal will be similar to that of a modified tri-council grant application. Assessment of the thesis proposal consists of both the written proposal and the oral defence of the proposal. Students who do not successfully defend the proposal after the first attempt may have one additional opportunity to successfully present and defend the written proposal, and this must be accomplished before the end of Year 4 of the program.
- If the student does not successfully defend the thesis proposal by the end of Year 4 (including a second attempt, if required), the Faculty of Nursing will recommend to SGS that the student's registration in the PhD program be terminated.
- The student's dissertation will be defended in the Doctoral Final Oral Examination of the School of Graduate Studies.

Doctoral Final Oral Examination (FOE). Students must complete an FOE of the thesis by the end of the final session in Year 5. The FOE will be conducted in accordance with the SGS Final Oral Examination Guidelines.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Nursing Science: Nursing Science PMNP Diploma

The **Post-Master's Nurse Practitioner (PMNP) Diploma** provides students holding an appropriate graduate degree the opportunity to develop the knowledge and skills required to practise as a nurse practitioner.

PMNP Diploma Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Nursing Science's additional admission requirements stated below.
- Applicants to the Post-Master's Nurse Practitioner (PMNP) diploma program must have completed a master's degree in nursing or an equivalent graduate degree that includes clinical nursing experience and a minimum of two years of clinical nursing experience.
- Preference is given to applicants who have one or more years in an advanced nursing practice role (in addition to clinical experience) and support within their employment setting.
- Applicants must hold current registration as a Registered Nurse or equivalent.

Completion Requirements

- All students in the PMNP diploma program are required to complete a total of **3.5 full-course equivalents (FCEs)** as follows:
  - NUR1401H *Pathophysiology and Pharmacotherapeutics 1*
  - NUR1402H *Pathophysiology and Pharmacotherapeutics 2*
  - NUR1403H *Advanced Health Assessment and Clinical Reasoning*
  - NURxxxxH* *Advanced Health Assessment and Therapeutic Management 1*
  - NURxxxxH* *Advanced Health Assessment and Therapeutic Management 2*

- NURxxxxY* *Nurse Practitioner Professional Roles, Leadership, and Responsibilities*, which must be taken alone in the final session and only after completion of all other coursework and program requirements.

* Course code to be confirmed pending approval.

Mode of Delivery: In person
Program Length: 6 sessions part-time
Time Limit: 6 years part-time

Nursing Science: Nursing Science MN, DN, PhD, Diploma Courses

Course Code	Course Title
NURxxxxH	Advanced Health Assessment and Therapeutic Management 1
NURxxxxH	Advanced Health Assessment and Therapeutic Management 2
NUR1016H	Health Systems, Policy, and the Profession
NUR1021H	Nursing Ethics
NUR1024H	Foundations of Qualitative Inquiry
NUR1025H	Doing Qualitative Research: Design and Data Collection
NUR1027H	Integrated Approaches to Research Appraisal and Utilization Part 1
NUR1030H	Principles of Leadership and Advanced Clinical Practice in Emergency Preparedness
NUR1036H	Advanced Nursing Practice in Oncology
NUR1038H	Social Determinants of Health in a Global Context
NUR1040H	Issues in Women's Health Care
NUR1045H	Theories of Pain: Impact on the Individual, Family, and Society
NUR1046H	Persistent Illness: Theoretical, Research, and Practice Implications
NUR1047H	Community Participation and Health
NUR1050H	Coping With Illness
NUR1057H	Interventions to Enhance Health, Abilities, and Well-being
NUR1059H	Technology, Digital Health, and Informatics for Advanced Practice Nursing
NUR1062H	Measuring Nursing Care Effectiveness: Economic and Financial Perspectives
NUR1067H	Mental Health Topics in Advanced Practice Nursing
NUR1074H	Facilitating Learning: Nursing Perspectives
NUR1075H	Introductory Statistics for Health Sciences Research
NUR1076H	Intermediate Statistics for Health Sciences Research
NUR1077H	Implementation Science in Healthcare
NUR1079Y	Research Methods for Knowledge Discovery
NUR1081H	PhD Student/Faculty Seminar 1
NUR1082H	PhD Student/Faculty Seminar 2
NUR1083H	Comparative Politics of Health Policy in Globalizing World
NUR1085H	Topics in Critical Perspectives in Health and Health Care
NUR1086H	Nursing Health Services Research Methods
NUR1087H	Foundations of Clinical Research
NUR1094H	Research Design, Appraisal, and Utilization: Nurse Practitioner
NUR1095H	Introduction to Qualitative Research: Methodologies, Appraisal, and Knowledge Translation: Nurse Practitioner
NUR1097H	Program Planning and Evaluation in Nursing: Nurse Practitioner
NUR1102H	Advanced Health Assessment and Clinical Reasoning
NUR1127H	Integrated Approaches to Research Appraisal and Utilization Part 2
NUR1138H	Global Health Topics for Nurse Practitioners
NUR1145H	Pathophysiology and Pharmacotherapeutics 2
NUR1151H	Theories and Concepts in Nursing Leadership and Administration
NUR1152H	Leading and Managing Effective Health Care Teams
NUR1156H	History of Ideas in Nursing Practice: Health Systems Leadership and Administration
NUR1157H	Program Planning and Evaluation in Nursing: Health Systems Leadership and Administration
NUR1161H	Advanced Concepts in Leadership and Administration
NUR1169Y	Advanced Nursing Practice Scholarship: Health Systems Leadership and Administration
NUR1170H	Introduction to Advanced Practice Nursing
NUR1171H	Topics in Advanced Practice Nursing
NUR1174H	Research Design, Appraisal, and Utilization: Clinical

Course Code	Course Title
NUR1175H	Introduction to Qualitative Research: Methodologies, Appraisal, and Knowledge Translation: Clinical
NUR1176H	History of Ideas in Nursing Practice: Clinical
NUR1177H	Program Planning and Evaluation in Nursing: Clinical
NUR1179H	Advanced Nursing Practice Scholarship: Clinical
NUR1221Y	Nurse Practitioners: Roles and Issues
NUR1223Y	Nurse Practitioner Professional Roles, Leadership, and Responsibilities
NUR1301H	Leadership: Health Services and Education
NUR1302H	Implementation Science: Health Services and Education
NUR1303H	Policy and Politics in Nursing Practice and Education
NUR1311H	DN Seminar 1
NUR1312H	DN Seminar 2
NUR1313H	DN Seminar 3
NUR1314H	DN Seminar 4
NUR1331H	Analysis and Application of Individual and Population Health Data
NUR1332H	Informatics and Technologies for Practice Advancement
NUR1333H	Equity and Ethics in Healthcare Leadership
NUR1334H	Quality Improvement, Safety, and Evaluation Science
NUR1335H	The Scholarship of Teaching and Learning in Healthcare Practice and Education
NUR1398H	DN Internship 1
NUR1399H	DN Internship 2
NUR1401H	Pathophysiology and Pharmacotherapeutics 1
NUR1402H	Pathophysiology and Pharmacotherapeutics 2
NUR1403H	Advanced Health Assessment and Clinical Reasoning

Nutritional Sciences

Nutritional Sciences: Introduction

Faculty Affiliation

Medicine

Degree Programs

Nutritional Sciences

MSc and PhD

Combined Degree Programs

MD / PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Food Studies**
  - Nutritional Sciences, MSc, PhD
- **Global Health (U of T Scholar)**
  - Nutritional Sciences, PhD
- **Public Health Policy** (admissions have been administratively suspended)
  - Nutritional Sciences, MSc, PhD
- **Women's Health**
  - Nutritional Sciences, MSc, PhD
- **Toxicology**
  - Nutritional Sciences, MSc, PhD

Overview

The Department of Nutritional Sciences is one of the few departments of nutrition in North America to be located within a Faculty of Medicine. This, together with its close linkages with the University of Toronto's Dalla Lana School of Public Health, allows the department to fully explore the relationships between nutrition and human health and disease, and to influence clinical practice and public health programs. It also creates unique opportunities for collaboration with the highest concentration of University-affiliated hospitals, clinicians, and health researchers in North America.

Although the department is centered in the Basic Sciences sector of the Faculty, its activities include not only basic science but also clinical and community aspects of nutrition and food and nutrition policy. These activities that range from "bench to bedside to populations" make it a model of integration within the whole of the health sciences complex at U of T, enabling a full exploration of the relationships between nutrition and human health to influence both clinical practice and public health policy.

Applicants interested in pursuing a Master of Public Health degree in Nutrition and Dietetics are advised to consult the calendar entry of the Dalla Lana School of Public Health for details.

Contact and Address

Web: nutrisci.med.utoronto.ca
Email: grad.nutrisci@utoronto.ca
Telephone: (416) 978-6071
Fax: (416) 978-5882

Department of Nutritional Sciences
Temerty Faculty of Medicine, University of Toronto
Medical Sciences Building, 5th Floor, Room 5253A
1 King's College Circle, Toronto, Ontario, Canada M5S 1A8

Nutritional Sciences: Graduate Faculty

Full Members

Allard, Johane - MD
Anderson, Harvey - BSc, MSc, PhD
Bandsma, Robert - MD
Bazinet, Richard - BSc, PhD ***(Associate Chair, Research and Innovation)***
Beaudry, Jacqueline - BSc, MSc, PhD
Bhutta, Zulfiqar - MBBS, PhD
Boyd, Norman - MD
Comelli, Elena - MSc, PhD ***(Graduate Coordinator, Admissions and Awards)***
Courtney-Martin, Glenda - BASc, MSc, PhD
El-Sohemy, Ahmed - BSc, MSc, PhD
Hamilton, Jill - BSc, MSc, MD
Hanley, Anthony - BSc, MSc, PhD ***(Associate Chair, Graduate Education)***
Jenkins, David J.A. - BA, BS, MD, MA, MB, PhD
Kim, Young-In - MD
Kotsopoulos, Joanne - BSc, MSc, PhD
Leiter, Lawrence - BSc, MD
Ma, David - BSc, PhD
Maguire, Jonathon - BSc, MD, MSc, MSc
Malik, Vasanti - BS, MS, ScD
Narod, Steven - BSc, MD
O'Connor, Deborah - BASc, MS, PhD ***(Chair and Graduate Chair until December 31, 2024)***
Pencharz, Paul - ChB, MD, MB
Roth, Daniel - BSc, MSc, MD
Sellen, Daniel - BA, AM, PhD
Sherman, Philip - MD
Sievenpiper, John - BASc, MD, MFS, PhD
Tomlinson, Christopher - BSc, MBChB, PhD
Unger, Sharon - MD, MD
Vuksan, Vladimir - BSc, MSc, PhD
Ward, Wendy - BASc, MSc, PhD
Zlotkin, Stanley - BSc, MD, PhD

Members Emeriti

Bruce, Robert - BSc, MD, MSc, PhD, LMCC
Jeejeebhoy, Khursheed - MB, PhD
Krondl, Maria - BSc, PhD
L'Abbé, Mary - BSc, MSc, PhD
Rao, A. Venketeshwer - BSc, MSc, PhD
Tarasuk, Valerie - BA, BASc, BEd, MSc, PhD
Thompson, Lilian - BSc, MSc, PhD

Associate Members

Arcand, Jo Anne - BSc, MSc, PhD
Asztalos, Elizabeth - BScN
Ball, Ronald - BSc, MSc, PhD
Birken, Catherine - MSc, MD
Boucher, Beatrice Ann - BSc, MHSc
Fox, Ann - BAA, MHSc, PhD
Garcia-Bailo, Bibiana - BA, MS, PhD
Hulst, Jessie - MD
Laar, Matilda - BSc, MPH, PhD
Levitt, Anthony - DGO, MB, MBBS
Metherel, Adam - BSc, MSc, PhD
Miliku, Kozeta - MSc, MD, DSc, PhD
Musa-Veloso, Kathy - BSc, MSc, PhD
Pausova, Zdenka - MD
Raffoul, Amanda - BA, MPH, PhD
Yeung, David - BA, MA, PhD

Nutritional Sciences: Nutritional Sciences MSc

The aim of the **Master of Science (MSc) program** is to develop the student's abilities to conceptualize research problems in the area of human nutrition, synthesize ideas and approaches in the research problem, analyze and interpret data, transmit his or her findings to peers, and expand his or her knowledge in, and perspective of, the field of human nutrition. Thus, major emphasis is placed on the research project and thesis.

The MSc program can be taken on a full-time or part-time basis. A limited number of students are admitted to the program on a part-time basis.

MSc Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Students with diverse backgrounds are encouraged to apply. Applicants must also satisfy the Department of Nutritional Sciences' additional admission requirements stated below.
- A- standing in the final two years of a bachelor's degree program or evidence of strong potential as a researcher.

Completion Requirements

- **Coursework.** Students must complete **2.0 full-course equivalents (FCEs)** as follows:
  - participation in NFS1204Y *Master's Seminars in Nutritional Sciences* throughout their period of full-time registration and
  - a minimum of two half courses (1.0 FCE).
- For students with undergraduate training in nutritional sciences, at least one of these courses must be taken in the department. Students with undergraduate training in disciplines other than nutritional sciences must take at least two half courses from the department.
- A course in statistical methods or research design and analysis is required if not completed previously.
- **Thesis** on an approved research area and its defence at an oral examination.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Nutritional Sciences: Nutritional Sciences PhD

The aim of the **Doctor of Philosophy (PhD) program** is to develop the student's abilities to conceptualize research problems in the area of human nutrition, synthesize ideas and approaches in the research problem, analyze and interpret data, transmit their findings to peers, and expand their knowledge in, and perspective of, the field of human nutrition. Thus, major emphasis is placed on the research project and thesis.

Applicants may enter the PhD program via one of three routes: 1) following completion of an MSc degree; 2) transfer from the University of Toronto MSc program; or 3) direct entry following completion of a bachelor’s degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies.
- Applicants must also satisfy the Department of Nutritional Sciences' additional admission requirements stated below.
- Applicants may enter the PhD program with an appropriate MSc degree with at least an A– standing or evidence of strong potential as a researcher.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **3.0 full-course equivalents (FCEs)** as follows:
  - NFS1304Y *Doctoral Seminars in Nutritional Sciences*

    - a minimum of four half courses (2.0 FCEs).
- The courses will be chosen by each student to provide an appropriate background for their area of investigation. It is expected that all students will have an adequate knowledge of research design and statistics through coursework in their past or the current graduate program. The choice of courses will be made in consultation with the supervisor and the student's advisory committee and is subject to the approval of the department.
- Successful completion of a **PhD qualifying examination** in nutritional sciences is required by the end of Year 1 of registration in the program. The examination is designed to ensure that students have developed a rigorous and comprehensive research proposal in a timely fashion. The oral examination is approximately two hours long, is graded as pass/fail, and takes place approximately nine months following initial registration. The examination will be conducted by the PhD Qualifying Examination Committee consisting of two faculty members appointed by the department and two faculty members chosen by the student. A student who fails the first attempt at the exam will be permitted one more attempt. Failure of the second attempt will result in a recommendation for program termination.
- **Thesis.**
- Student must pass the **departmental examination** before proceeding to the **Doctoral Final Oral Examination**.
- The **residence** requirement is two years, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.
- It is expected that students can complete their PhD within four years of full-time study, research, and thesis preparation; however, some students may require longer.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

Applicants must:

- Be enrolled in the U of T MSc program in Nutritional Sciences. Excellent students with high academic standing (normally a minimum A– average on MSc courses) who have clearly demonstrated the ability to do research at the doctoral level may be considered for transfer to the PhD program. Recommendation of the advisory committee is required.
- Successfully complete a reclassification transfer exam within 12 months of starting the MSc program; this includes successfully defending a research proposal during a reclassification oral examination.
- Successfully complete the required MSc courses:
    - NFS1204Y *Master's Seminars in Nutritional Sciences* and
    - two other half courses (1.0 FCE).

Completion Requirements

- **Coursework.** Students must complete successfully complete a total of **4.0 FCEs** as follows:
    - NFS1304Y *Doctoral Seminars in Nutritional Sciences*
    - a minimum of six half courses (3.0 FCEs) including the two half courses taken during Year 1 of the MSc program.
- For a student who is reclassified from the MSc to the PhD, the intent is that all requirements of the normal MSc (except the thesis) plus all requirements of the PhD shall be completed. There is no priori reduction of course requirements and no expectation that the course requirements to be completed in the PhD will be any different than would hold if the student completed the MSc and then enrolled in the PhD.
- A PhD qualifying exam is **not** required for students transferring from the MSc program.
- **Thesis.**
- Students must pass the **departmental examination** before proceeding to the **Doctoral Final Oral Examination**.
- The **residence** requirement is three years, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.
- It is expected that students can complete their PhD within five years of full-time study, research, and thesis preparation; however, some students may require longer.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies.
- Applicants must also satisfy the Department of Nutritional Sciences' additional admission requirements stated below.
- Applicants may enter the PhD program directly from a bachelor's degree if they have an academic background in nutrition or a related discipline, an A or better average in their final two years, and strong evidence of research aptitude (such evidence may include lead authorship on research publications and presentations at scientific conferences and strong letters of reference from undergraduate research mentors).

Completion Requirements

- **Coursework.** Students must successfully complete a total of **4.0 full-course equivalents (FCEs)** as follows:
    - NFS1304Y *Doctoral Seminars in Nutritional Sciences*
    - a minimum of six half courses (3.0 FCEs).

- The courses will be chosen by each student to provide an appropriate background for their area of investigation. It is expected that all students will have an adequate knowledge of research design and statistics through coursework in their past or the current graduate program. The choice of courses will be made in consultation with the supervisor and the student's advisory committee and is subject to the approval of the department.
- Successful completion of a **PhD qualifying examination** in nutritional sciences is required within the first 18 months of registration in the program. The examination is designed to ensure that students have developed a rigorous and comprehensive research proposal in a timely fashion. The oral examination is approximately two hours long, is graded as pass/fail, and takes place approximately nine months following initial registration. The examination will be conducted by the PhD Qualifying Examination Committee consisting of two faculty members appointed by the department and two faculty members chosen by the student. A student who fails the first attempt at the exam will be permitted one more attempt. Failure of the second attempt will result in a recommendation for program termination.
- **Thesis.**
- Student must pass the **departmental examination** before proceeding to the **Doctoral Final Oral Examination**.
- The **residence** requirement is three years, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.
- It is expected that students can complete their PhD within five years of full-time study, research, and thesis preparation; however, some students may require longer.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Nutritional Sciences: Nutritional Sciences MSc, PhD Courses

Not all courses are offered every year. Please consult the department regarding course offerings.

Course Code	Course Title
NFS1201H	Public Health Nutrition
NFS1204Y	Master's Seminars in Nutritional Sciences
NFS1212H	Regulation of Food Composition, Health Claims, and Safety
NFS1216H	Selected Topics in Nutrition
NFS1218H	Recent Advances in Nutritional Sciences I
NFS1220H	Clinical Nutrition
NFS1222H	Recent Advances in Nutritional Sciences II: Diet and Cardiovascular
NFS1223H	Dietary Carbohydrate and Glycaemic Index in Health and Disease
NFS1224H	Nutritional Epidemiology
NFS1226H	Nutrition and Cancer
NFS1301H	Directed Reading in Nutritional Sciences
NFS1304Y	Doctoral Seminars in Nutritional Sciences
NFS1484H	Advanced Nutrition

Occupational Science and Occupational Therapy

Occupational Science and Occupational Therapy: Introduction

Faculty Affiliation

Medicine

Degree Programs

Occupational Therapy

MScOT

Collaborative Specializations

The following collaborative specialization is available to students in the participating degree program as listed below:

- **Women's Health**
  - Occupational Therapy, MScOT

Overview

The Department of Occupational Science and Occupational Therapy is committed to providing graduate and continuing education programs that enable occupational therapists to be leaders in research, clinical practice, and the promotion of health and well-being. Core and clinical faculty members provide dynamic, evidence-based, and comprehensive instruction and mentorship. Graduates are innovative professionals focused on enabling occupation and enhancing health and well-being.

Since September 2018, the MScOT is offered both at the St. George (downtown Toronto) campus and at the University of Toronto Mississauga (UTM) campus. Applicants will have an opportunity to indicate their preferred campus. Campus preferences will be considered but they are not guaranteed.

Contact and Address

Web: ot.utoronto.ca
Email: ot.reception@utoronto.ca
Telephone: (416) 946-8571
Fax: (416) 946-8570

Department of Occupational Science and Occupational Therapy
University of Toronto
Room 160, 500 University Avenue
Toronto, Ontario M5G 1V7 Canada

Occupational Science and Occupational Therapy: Graduate Faculty

Full Members

Agur, Anne - BSc, MSc, PhD
Astell, Arlene - BSc, PhD
Cameron, Jill - BSc, MS, PhD
Colantonio, Angela - BA, BSc(OT), MHSc, PhD
Colquhoun, Heather - PhD
Forhan, Mary - BSc(OT), MHSc, PhD ***(Chair and Graduate Chair)***
Hitzig, Sander - PhD
Ho, Emily - BSc(OT), MEd, PhD, PhD
King, Gillian - BA, MA, PhD
Mihailidis, Alex - BASc, MASc, PhD
Nalder, Emily - BOTh, PhD
Nowrouzi-Kia, Behdin - BSc, MSc
Parsons, Janet - BA, BSc(PT), MSc, PhD
Rappolt, Susan - BSc(OT), MSc, PhD
Reed, Nick - BA, MSc, PhD
Rotenberg, Shlomit - PhD
Wang, Rosalie - BSc, BSc(OT), PhD

Members Emeriti

Dawson, Deirdre - BSc, MSc, PhD
Friedland, Judith - BA, MA, PhD
Kirsh, Bonnie - BSc(OT), MEd, PhD
Mckee, Pat McKee - DipOT, BSc(OT), MSc
Polatajko-Howell, Helene J. - PhD
Reid, Denise - BSc(OT), MEd, PhD
Renwick, Rebecca - DipOT, BA, PhD

Associate Members

Barker, Donna - BSc(OT), MSc
Cockburn, Lynn - BCom, BSc(OT), MEd, MPH, PhD
Davis, Jane - BSc, BSc(OT), MSc
Duncan, Andrea - BSc(OT), MBA, PhD
Farragher, Janine - PhD
Farrow, Susan - BSc(OT), BA
Fourt, Anne - BSc(OT), MEd
Hunt, Anne - MSc, PhD
Kingsnorth, Shauna - BS, MA, PhD
Kokorelias, Kristina M. - MSc, PhD
Langlois, Sylvia - BSc, MSc
Lowe, Amanda Mandy - BSc(OT), MS
Mansfield, Elizabeth - MSc, PhD
Markoulakis, Roula - MSc, PhD
Reel, Kevin - BSc(OT), MSc
Rowland, Paula - BS, BS
Sangrar, Ruheena - MSc, PhD
Tam-Seto, Linna - AB, BS, MSc, PhD
Vasquez, Brandon - BS, MA, PhD
Wasilewski, Marina B. - BSc, MSc, PhD
Welch, Christie - BA, BSc(OT), PhD, PhD

Occupational Science and Occupational Therapy: Occupational Therapy MScOT

The Master of Science in Occupational Therapy (MScOT) program prepares students in advanced academic and professional knowledge and applied research skills for leadership in occupational therapy practice. The program emphasizes the application of theory and research evidence to clinical practice through rigorous studies in occupational therapy and research production and utilization.

Graduates are eligible to write the certification examination of the Canadian Association of Occupational Therapists, a requirement for registration with the College of Occupational Therapists of Ontario and most other professional regulatory colleges in Canada. Practice in another country generally requires the graduate to pass the licensing requirement specific to that country. Graduates are eligible to:

- practise independently in a variety of roles, such as consultants and case managers, and in a range of settings, such as acute care, interdisciplinary programs, private practice, and primary health care;
- supervise rehabilitation assistants, OT aides, or other support workers;
- use principles of research-based practice to guide and evaluate service delivery;
- contribute to research that will advance the knowledge base of the discipline;
- assume management roles;
- take leadership roles in the profession;
- take leadership roles in health care and other sectors including social services, education, and labour;
- fill academic-practitioner positions; and
- pursue doctoral studies and careers in academia or clinical research.

The MScOT program is offered as a two-year full-time program. Admissions to the one-year, advanced-standing part-time option have been suspended.

MScOT Program (24-Month Full-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Occupational Science and Occupational Therapy's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with high academic standing and a mid-B average or better in the final year of study.
- To determine initial ranking only, the department will review the last 10.0 full-course equivalents (FCEs) completed at the undergraduate level by the application deadline.
- Applicants must complete the Casper test online. Casper is an online open-response situational judgement test designed to evaluate problem-solving skills as well as personal and professional characteristics such as communication, ethics, and empathy. Applicants must register to take the test and have their results sent to the MScOT program ahead of the application deadline. Find the set dates to write for different programs. Applicants can submit for disability-related testing accommodations and fee assistance.
- Apply online using the Ontario Rehabilitation Sciences Programs Application Service (ORPAS). Applications are accepted around October each year, with a deadline near the end of December or early January. Exact deadlines are posted on the ORPAS website and in the *ORPAS Instruction Booklet*.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction is not English must provide proof of English proficiency by March 1 of the year of application. See General Regulations, section 4.3 English-Language Proficiency in this calendar for general information and acceptable tests. The department strongly prefers the Test of English as a Foreign Language (TOEFL) and requires a minimum score of:
  - 600 on the paper-based test, accompanied by a minimum score of 5 on the Test of Written English (TWE)
  - 100/120 on the Internet-based test with 22/30 on the speaking section and 22/30 on the writing section.

  TOEFL candidates should request that results be sent to institution code 0982.
- Visit the Occupational Therapy and ORPAS websites for additional information regarding application document submissions (e.g., confidential assessment forms, resumé, personal statement submission).

Completion Requirements

- The MScOT is a two-year, 24-course (19.0 full-course equivalents (FCEs)) program of continuous, full-time study.
- Students begin their studies in September and complete six consecutive sessions, with a range of four to six concurrent courses in each session.
- There are four full-time block fieldwork components within the program of study.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

MScOT Program (12-Month, Advanced-Standing Part-Time Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Occupational Science and Occupational Therapy's additional admission requirements stated below.
- A bachelor's degree in occupational therapy from a recognized university with high academic standing and a mid-B average or better in the final year of study.

- Applicants must be registered, or eligible for registration, for independent practice as an occupational therapist in Canada with a provincial regulating body.
- Apply online using the SGS online application system. Applications are accepted approximately in mid-February each year, with a deadline approximately at the end of March (subject to change).
- Applicants whose primary language is not English and who graduated from a university where the language of instruction is not English must provide proof of English proficiency by March 1 of the year of application. See General Regulations, section 4.3 English-Language Proficiency in this calendar for general information and acceptable tests. The department strongly prefers the Test of English as a Foreign Language (TOEFL) and requires a minimum score of:
  - 600 on the paper-based test, accompanied by a minimum score of 5 on the Test of Written English (TWE)
  - 100/120 on the Internet-based test with 22/30 on the speaking section and 22/30 on the writing section.

  TOEFL candidates should request that results be sent to institution code 0982.
- Visit the Occupational Therapy website for additional information regarding application document submissions (e.g., reference letters, resumé, personal statement submission).

Completion Requirements

- The advanced-standing option is a three-consecutive-session, part-time program of study beginning in September. Students must complete 3.5 full-course equivalents (FCEs): OCT1111Y, OCT1122Y, and OCT1220Y.
- Students complete the advanced-standing option in an online environment with a mandatory one-week, on-campus residency.
- For more information about the application process, tuition, and supervision, etc., please visit the Occupational Science and Occupational Therapy website.

Mode of Delivery: Hybrid
Program Length: 3 sessions part-time (typical registration sequence: FWS)
Time Limit: 3 years part-time

Occupational Science and Occupational Therapy: Occupational Therapy MScOT Courses

Required Courses for the 24-Month Full-Time Option

Course Code	Course Title
OCT1100H	Applied Skills and Technology: Human Factors and Design in Occupational Therapy
OCT1111Y	Occupational Science: Foundations for Occupational Therapy
OCT1122Y	Research Approaches and Methods in Occupational Therapy
OCT1131Y	Professional Practice I and Introduction to Fieldwork
OCT1132H	Occupational Therapy Practice II
OCT1141H	Assessment in Occupational Therapy
OCT1152Y	Musculo-Skeletal Foundations for Occupational Therapy Practice
OCT1162Y	Mental Health Foundations for Occupational Therapy Practice
OCT1172Y	Neurological Foundations for Occupational Therapy Practice
OCT1183Y	Occupational Therapy Fieldwork I
OCT1190Y	Mentorship and Interprofessional Education
OCT1193H	Enabling Occupation Across the Life Course
OCT1220Y	Graduate Research Project
OCT1233H	Occupational Therapy Practice III
OCT1236H	Transition to Occupational Therapy Practice
OCT1251H	Enabling Occupation with Children: Part I
OCT1252H	Enabling Occupation with Children: Part II
OCT1261H	Enabling Occupation with Adults: Part I
OCT1262Y	Enabling Occupation with Adults: Part II
OCT1271H	Enabling Occupation with Older Adults: Part I
OCT1272H	Enabling Occupation with Older Adults: Part II
OCT1281Y	Occupational Therapy Fieldwork II
OCT1282Y	Occupational Therapy Fieldwork III
OCT1283Y	Occupational Therapy Fieldwork IV

Required Courses for the 12-Month, Advanced-Standing Part-Time Option

Course Code	Course Title
OCT1111Y	Occupational Science: Foundations for Occupational Therapy
OCT1122Y	Research Approaches and Methods in Occupational Therapy
OCT1220Y	Graduate Research Project

Pharmaceutical Sciences

Pharmaceutical Sciences: Introduction

Faculty Affiliation

Pharmacy

Degree Programs

Pharmaceutical Sciences

MSc and PhD

- Fields:
  - Biomolecular Pharmaceutical Sciences;
  - Clinical, Social, and Administrative Pharmaceutical Sciences

Pharmacy

MScPhm

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Addiction Studies**
  - Pharmaceutical Sciences, MSc, PhD
- **Aging, Palliative and Supportive Care Across the Life Course**
  - Pharmaceutical Sciences, MSc, PhD
- **Bioethics** (admissions have been administratively suspended)
  - Pharmaceutical Sciences, MSc, PhD
- **Biomedical Engineering** (admissions have been administratively suspended)
  - Pharmaceutical Sciences, MSc, PhD
- **Cardiovascular Sciences**
  - Pharmaceutical Sciences, MSc, PhD
- **Global Health (U of T Global Scholar)**
  - Pharmaceutical Sciences, MSc, PhD
- **Health Services and Policy Research** (admissions have been administratively suspended)
  - Pharmaceutical Sciences, MSc, PhD
- **Neuroscience**
  - Pharmaceutical Sciences, MSc, PhD
- **Next-Generation Precision Medicine**
  - Pharmaceutical Sciences, PhD
- **Toxicology**
  - Pharmaceutical Sciences, MSc, PhD

Overview

Pharmaceutical sciences encompasses all aspects of the discovery, development, administration, distribution, and utilization of therapeutic drugs, and the nature, functioning, and dysfunctioning of the biological systems with which drugs interact. As a global leader in pharmaceutical research, the Leslie Dan Faculty of Pharmacy is home to some of the most prominent and distinguished experts in the area of pharmaceutical sciences. The department is centrally located in the heart of Toronto's Health Sciences Discovery District. Students have the opportunity to conduct their research in collaboration with a wide range of departments at the University of Toronto and nearby world-class teaching hospitals and research institutes to solve some of health science's most pressing problems.

A degree in Pharmaceutical Sciences can lead to a variety of career opportunities. Graduates have found employment in academia, the pharmaceutical industry, government, community or hospital pharmacy, consulting, and other businesses.

The Graduate Department of Pharmaceutical Sciences offers research opportunities and courses in two fields of study:

- Biomolecular Pharmaceutical Sciences: drug receptor interactions, molecular biology, electrophysiology, biochemistry, clinical, adverse drug reactions, drug metabolism; pharmaceutical and medicinal chemistry, pharmaceutical formulations, radiopharmaceutical synthesis, drug discovery, biophysical chemistry, basic pharmacokinetics, and clinical research;
- Clinical, Social, and Administrative Pharmaceutical Sciences: bioethics, clinical pharmacy, drug policy, drug safety, global health and corruption, health economics, health policy, health services research, pedagogy, pharmacoeconomics, pharmacoepidemiology, pharmacy administration, pharmacy practice, social pharmacy, and social psychology.

Contact and Address

Web: pharmacy.utoronto.ca/programs/graduate-department-pharmaceutical-sciences
Email: phm.grad@utoronto.ca
Telephone: (416) 978-8896
Fax: (416) 978-8511

Graduate Department of Pharmaceutical Sciences
Leslie Dan Faculty of Pharmacy
University of Toronto 144 College Street
Toronto, Ontario M5S 3M2 Canada

Pharmaceutical Sciences: Graduate Faculty

Full Members

Allen, Christine - BSc, PhD
Angers, Stéphane - BSc, PhD
Austin, Zubin - BA, BScPhm, MBA, MEd, MISt, PhD ***(Academic Director, Centre for Practice Excellence)***
Bendayan, Reina - BScPhm

Bonin, Robert - BSc, PhD
Boon, Heather - BScPhm, PhD
Cadarette, Suzanne - BSc, MSc, PhD ***(Graduate Coordinator)***
Chalikian, Tigran - PhD
Cummins, Carolyn - BSc, PhD ***(Director, Graduate Department of Pharmaceutical Sciences)***
Dolovich, Lisa - BScPhm, MSc ***(Dean)***
Gomes, Tara - BSc, MSc, PhD
Grootendorst, Paul - BA, MEc, PhD
Guilcher, Sara - BSc, MSc, MSc(PT), PhD
Hampson, David - BSc, MSc, PhD
Heerklotz, Heiko - PhD
Henderson, Jeffrey - BA, PhD
Ito, Shinya - MD, BM
Kelley, Shana - BA, PhD
Kohler, Jillian - BA, MA, PhD
Kotra, Lakshmi - BScPhm, PhD
Lee, Ping - BSChE, PhD
Macgregor, Robert - BSc, PhD
MacKeigan, Linda - BScPhm, PhD
Mamdani, Muhammad - MA, MPH
McCarthy, Lisa - BScPhm, MSc
Moraes, Theo - MD
Pang, Sandy - BSc, BSc, PhD, PhD
Papadimitropoulos, Emmanuel - BSc, BSP, MScPhm, PhD
Pardee, Keith Ian - BSc, MSc, PhD
Pennefather, Peter - BSc, PhD
Piquette-Miller, Micheline - BScPhm, PhD ***(Associate Dean, Research)***
Reilly, Raymond - BScPhm, MScPhm, PhD ***(Director, Centre for Pharmaceutical Oncology)***
Seto, Winnie - BScPhm, MSc
Sproule, Beth - BScPhm
Taddio, Anna - BScPhm, MSc, PhD
Tadrous, Mina - MSc, PhD
Thompson, Alison - BA, MA, PhD
Uetrecht, Jack - BSc, MD, MSc, PhD
Wells, Peter - BScPhm
Wong, William Wai Lun - BSc, MCS, PhD
Wu, Shirley X.Y. - BSc, MSc, PhD
Zheng, Gang - MSc, PhD

Associate Members

Bozinoff, Nikki - MD
Burden, Andrea Michelle - BS, MA, PhD
Burry, Lisa - BScPhm
Chen, Eric - BSc, MD, PhD
Chit, Ayman - PhD
Chung, Erin - BSc, BScPhm, MSc, PhD
Chung, Peter - MD
Corson, Tim - BSc, MSc, PhD
Crown, Natalie - BScPhm
De Lannoy, Ines A.M. - BScPhm, PhD
Dubins, David - BSc, PhD
Grundy, Quinn - BScN, PhD
Ho, Certina - BScPhm, MEd, MISt, PhD
Katz, Joel - MA, PhD
Kellar, Jamie - BSc, BScPhm, PhD ***(Associate Dean, Academic)***
Kim, Sandra - MD, MSc
Labouta, Hagar - BSc, MSc, PhD
Lake, Jennifer - BSc
Lexchin, Joel - BSc, MD, MSc
Li, Bowen - BScPhm, PhD
Poda, Gennadiy - MSc, PhD
Rochon, Paula - MD
So, Miranda - BScPhm
Steenhof, Naomi - BEd, BScPhm, MHPE, PhD
Sun, Hong-Shuo - MSc, DrMed, DPhil
Swidrovich, Jaris - BSP
Tseng, Alice - BScPhm
Uehling, David - BSc, PhD
Yamashita, Sharon - BScPhm

Pharmaceutical Sciences: Pharmaceutical Sciences MSc

The Graduate Department of Pharmaceutical Sciences at the Leslie Dan Faculty of Pharmacy offers students in the physical, biological, clinical, health, and social sciences a challenging and rewarding research-intensive program leading to the **Master of Science (MSc) degree**. The result is an educational program that encourages multidisciplinary approaches to problem-solving and collaboration between students and faculty members. Graduate students are immersed in a challenging program that equips them with new ways of thinking and provides them with multiple tools to solve problems.

The MSc program can be taken on a full-time or part-time basis. Admission and program requirements are the same for the full-time and part-time options. A limited number of students will be admitted to the part-time option.

MSc Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Pharmaceutical Sciences' additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with at least a mid-B average in each of the last two years of undergraduate study.
- The Pharmaceutical Sciences Graduate Admissions Committee considers the applicant's background and accomplishments, academic standing, and financial support from the potential supervisor.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination is not English, must demonstrate facility in the English language through the successful completion of one of the following English-language proficiency tests:
  - Test of English as a Foreign Language (TOEFL) with the following minimum scores:
    - paper-based TOEFL: 600 and 5 on the Test of Written English (TWE)
    - Internet-based TOEFL: 100/120 and 22/30 on the writing and speaking sections.
  - International English Language Testing System (IELTS): a score of 7.0 (Academic) with at least 6.5 in each component.
  - The Certificate of Proficiency in English (COPE): a score of 76, with at least 22 in each component and 32 in the writing component.
  - Academic Preparation Course: a final grade of B in Level 60.

- If the undergraduate degree was not obtained from a recognized Canadian or US university, the applicant must write and achieve scores at the 50th percentile ranking or better on the Graduate Record Examination (GRE; General Test).

Completion Requirements

- The MSc is a program of study that provides the appropriate foundation for thesis research. The program depends on the student's background and is planned in consultation with the supervisor and advisory committee, with the approval of the graduate director(s).
- **Coursework.** Students must successfully complete a minimum of **1.0 full-course equivalent (FCE)**.
- Yearly advisory committee meetings.
- Attend at least one **research ethics workshop** (0.0 FCE) for graduate students.
- **One poster presentation** to all faculty and graduate students at Graduate Research in Progress (GRIP).
- Annual attendance at GRIP.
- Regular attendance at a minimum of **eight Pharmaceutical Sciences departmental seminars** as well as student group seminars for two years (or less if all other program requirements are completed).
- An **annual oral presentation** of the student's own research work is given in the student seminar series.
- Final seminar to be given during the **thesis defence**.
- A **thesis** based on an approved research problem in an area of pharmaceutical sciences.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 14 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Pharmaceutical Sciences: Pharmaceutical Sciences PhD

The Graduate Department of Pharmaceutical Sciences offers a challenging and rewarding research-intensive program leading to the PhD degree. Students in the program are immersed in pharmaceutical sciences, working, and collaborating with world-renowned researchers while gaining profound depth and experience in their area of study.

Applicants may enter the PhD program via one of three routes: 1) following completion of an appropriate master's degree; 2) transfer from the University of Toronto's Pharmaceutical Sciences MSc program; or 3) direct entry following completion of an appropriate bachelor's degree. Direct-entry admission spaces are limited.

The department offers a flexible-time PhD program option for selected students. This program benefits professionals with career obligations and whose employment is closely related to their intended area of research. Applicants must meet all the admission requirements for entry to the full-time PhD program in Pharmaceutical Sciences. The program requirements for the flexible-time PhD option are identical to those for the full-time PhD program.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Pharmaceutical Sciences' additional admission requirements stated below.
- Appropriate master's degree from a recognized university with a minimum overall B+ average.
- The Pharmaceutical Sciences Graduate Admissions Committee considers the applicant's background and accomplishments, academic standing, and financial support from the potential supervisor.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination is not English, must demonstrate facility in the English language through the successful completion of one of the following English-language proficiency tests:
  - Test of English as a Foreign Language (TOEFL) with the following minimum scores:
    - paper-based TOEFL: 600 and 5 on the Test of Written English (TWE)
    - Internet-based TOEFL: 100/120 and 22/30 on the writing and speaking sections.
  - International English Language Testing System (IELTS): a score of 7.0 (Academic) with at least 6.5 in each component.
  - The Certificate of Proficiency in English (COPE): a score of 76, with at least 22 in each component and 32 in the writing component.
  - Academic Preparation Course: a final grade of B in Level 60.
- If the undergraduate degree was not obtained from a recognized Canadian or US university, the applicant must write the Graduate Record Examination (GRE; General Test) and achieve scores at the 50th percentile ranking or better on the Verbal and Quantitative components and a minimum score of 5.0 on the Analytical Writing component.

Completion Requirements

- The PhD is a program of study that provides the appropriate foundation for thesis research. The program depends on the student's background and is planned in consultation with the supervisor and advisory committee, as well as with the approval of the graduate director(s).
- **Coursework.** Students normally complete **2.0 full-course equivalents (FCEs)** within the first three years of registration.
- Yearly advisory committee meetings.
- Successful completion of a **PhD qualifying examination** within the first 24 months of the program. Students are permitted a second attempt, if necessary, to satisfactorily complete the examination. The format of the examination will include the student giving a 20-minute presentation based on the proposal distributed to the Qualifying Examination Committee, followed by a question period. The student is expected to demonstrate appropriate understanding of the scientific basis of the research, the methodological approaches, and the technical details.

Failure to successfully complete the PhD qualifying examination will result in a recommendation for termination of registration in the program.
- Attend at least one **research ethics workshop** (0.0 FCE) for graduate students. Students who completed this requirement while registered in the MSc program are not required to attend a second workshop.
- **One poster presentation** to all faculty and graduate students at **Graduate Research in Progress (GRIP)**.
- Annual attendance at GRIP.
- Regular attendance at a minimum of **eight Pharmaceutical Sciences departmental seminars** as well as student group seminars in each academic year for four years (or less if all other program requirements are completed).
- An **annual oral presentation** of the student's own research work is given in the student seminar series.
- An **open final oral presentation** (50 minutes long) immediately prior to a **closed thesis defence**.
- A **thesis** in conformity with University of Toronto regulations, based on research conducted while registered in a PhD program at the University of Toronto.
- Students must be on campus and participate full-time (including Summer) until all program requirements are completed. Simultaneous registration in another full-time degree program is not allowed.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- Students who have a high academic standing and a clearly demonstrated ability to do research at the doctoral level may be eligible to transfer to the PhD program after one year in the MSc program. The student must have completed at least 1.0 full-course equivalent (FCE) with an average grade of A– during Year 1 of the master's program and must have financial support.
- A transfer from the MSc program to the PhD program occurs normally within 15 to 18 months of the student's first registration in the MSc program.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **3.0 full-course equivalents (FCEs)**.
- Successful completion of the **MSc to PhD transfer examination**.
- The transferred student must complete all remaining course requirements of the MSc program, except the thesis, in addition to the requirements of the PhD program. Credit is given in the doctoral program for research and graduate courses completed prior to the transfer.
- Yearly advisory committee meetings.
- Attend at least one **research ethics workshop** (0.0 FCE) for graduate students. Students who completed this requirement while registered in the MSc program are not required to attend a second workshop.
- **Two poster presentations** to all faculty and graduate students at **Graduate Research in Progress (GRIP)**, one of which may be at a peer-reviewed conference upon approval.
- Annual attendance at GRIP.
- Regular attendance at a minimum of **eight Pharmaceutical Sciences departmental seminars** as well as student group seminars in each academic year for four years (or less if all other program requirements are completed).
- An **annual oral presentation** of the student's own research work is given in the student seminar series.
- An **open final oral presentation** (50 minutes long) immediately prior to a **closed thesis defence**.
- A **thesis** in conformity with University of Toronto regulations, based on research conducted while registered in a PhD program at the University of Toronto.
- Students must be on campus and participate full-time (including Summer) until all program requirements are completed. Simultaneous registration in another full-time degree program is not allowed.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Pharmaceutical Sciences' additional admission requirements stated below.
- Under exceptional circumstances, students may be admitted directly to the PhD program with an appropriate bachelor's degree from a recognized university with a minimum A– (80%) average, or its equivalent, in senior-level courses.
- The Pharmaceutical Sciences Graduate Admissions Committee considers the applicant's background and accomplishments, academic standing, and financial support from the potential supervisor.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination is not English, must demonstrate facility in the English language through the successful completion of one of the following English-language proficiency tests:
  - Test of English as a Foreign Language (TOEFL) with the following minimum scores:
    - paper-based TOEFL: 600 and 5 on the Test of Written English (TWE)
    - Internet-based TOEFL: 100/120 and 22/30 on the writing and speaking sections.

    - International English Language Testing System (IELTS): a score of 7.0 (Academic) with at least 6.5 in each component.
    - The Certificate of Proficiency in English (COPE): a score of 76, with at least 22 in each component and 32 in the writing component.
    - Academic Preparation Course: a final grade of B in Level 60.
- If the undergraduate degree was not obtained from a recognized Canadian or US university, the applicant must write the Graduate Record Examination (GRE; General Test) and achieve scores at the 50th percentile ranking or better on the Verbal and Quantitative components and a minimum score of 5.0 on the Analytical Writing component.

Completion Requirements

- The PhD is a program of study that provides the appropriate foundation for thesis research. The program depends on the student's background and is planned in consultation with the supervisor and advisory committee, as well as with the approval of the graduate chair.
- **Coursework.** Students must successfully complete a total of **3.0 full-course equivalents (FCEs)**.
- Yearly advisory committee meetings.
- Successful completion of a **PhD qualifying examination** within the first 24 months of the program. Students are permitted a second attempt, if necessary, to satisfactorily complete the examination. The format of the examination will include the student giving a 20-minute presentation based on the proposal distributed to the Qualifying Examination Committee, followed by a question period. The student is expected to demonstrate appropriate understanding of the scientific basis of the research, the methodological approaches, and the technical details. Failure to successfully complete the PhD qualifying examination will result in a recommendation for termination of registration in the program.
- Attend at least one **research ethics workshop** (0.0 FCE) for graduate students. Students who completed this requirement while registered in the MSc program are not required to attend a second workshop.
- **Two poster presentation(s)** to all faculty and graduate students at **Graduate Research in Progress (GRIP)**, one of which may be at a peer-reviewed conference upon approval.
- Annual attendance at GRIP.
- Regular attendance at a minimum of **eight Pharmaceutical Sciences departmental seminars** as well as student group seminars in each academic year for four years (or less if all other program requirements are completed).
- An **annual oral presentation** of the student's own research work is given in the student seminar series.
- An **open final oral presentation** (50 minutes long) immediately prior to a **closed thesis defence**.
- A **thesis** in conformity with University of Toronto regulations, based on research conducted while registered in a PhD program at the University of Toronto.
- Students must be on campus and participate full-time (including Summer) until all program requirements are completed. Simultaneous registration in another full-time degree program is not allowed.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Flexible-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Pharmaceutical Sciences' additional admission requirements stated below.
- Appropriate master's degree from a recognized university with a minimum overall B+ average.
- The Pharmaceutical Sciences Graduate Admissions Committee considers the applicant's background and accomplishments, academic standing, and financial support from the potential supervisor.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination is not English are required to write the Test of English as a Foreign Language (TOEFL) with the following minimum scores:
    - paper-based TOEFL: 600 and 5 on the Test of Written English (TWE)
    - Internet-based TOEFL: 100/120 and 22/30 on the writing and speaking sections.
- If the undergraduate degree was not obtained from a recognized Canadian or US university, the applicant must write the Graduate Record Examination (GRE; General Test) and achieve scores at the 50th percentile ranking or better on the Verbal and Quantitative components and a minimum score of 5.0 on the Analytical Writing component.
- A letter of support from the employer.
- The departmental admissions committee reviews the applications; admission is highly selective with preference given to applicants who are members in good standing of a regulated profession or scientific society.

Completion Requirements

- The PhD is a program of study that provides the appropriate foundation for thesis research. The program depends on the student's background and is planned in consultation with the supervisor and advisory committee, with the approval of the graduate chair.
- **Coursework.** Students normally complete a total of **2.0 full-course equivalents (FCEs)**.
- Yearly advisory committee meetings.
- Successful completion of a **PhD qualifying examination** within the first 32 months of the program. Students are permitted a second attempt, if necessary, to satisfactorily complete the examination. The format of the examination will include the student giving a 20-minute presentation based on the proposal distributed to the Qualifying Examination Committee, followed by a question period. The student is expected to demonstrate appropriate understanding of the scientific basis of the research, the methodological approaches, and the technical details.

Failure to successfully complete the PhD qualifying examination will result in a recommendation for termination of registration in the program.
- Attend at least one **research ethics workshop** (0.0 FCE) for graduate students. Students who completed this requirement while registered in the MSc program are not required to attend a second workshop.
- **One poster presentation, or two poster presentations by those without a master's degree**, to all faculty and graduate students at **Graduate Research in Progress (GRIP)**.
- Annual attendance at GRIP.
- Regular attendance at a minimum of **eight Pharmaceutical Sciences departmental seminars** as well as student group seminars in each academic year for four years. Students whose current professional background is such that they would be deemed to have fulfilled a significant portion of the requirements contained in the department seminar series may be eligible for a reduction of four seminars upon consultation with the Director.
- An **annual oral presentation** of the student's own research work is given in the student seminar series.
- An **open final oral presentation** (50 minutes long) immediately prior to a **closed thesis defence**.
- A **thesis** in conformity with University of Toronto regulations, based on research conducted while registered in a PhD program at the University of Toronto.
- Students must ensure that they have adequate time on campus to attend classes and to fulfil the academic requirements.
- Full-time registration is required for the first four years and thereafter, students may register part-time.

Mode of Delivery: In person
Program Length: 8 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

Pharmaceutical Sciences: Pharmacy MScPhm

The **Master of Science in Pharmacy (MScPhm) program** is designed to train future academic clinical pharmacist leaders. As members of patient care teams and as pharmacy practice researchers, graduates of the MScPhm program will influence the provision of pharmaceutical care at the patient and population level. As teachers, they will shape the development of current and future pharmacists.

Applicants may apply to the Fall session only.

MScPhm Program (Full-Time and Part-Time Options)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Pharmaceutical Sciences' additional admission requirements stated below.
- Applicants must have status as a pharmacist, based on one of the following:
  - a bachelor's degree from a Canadian pharmacy program accredited by the Canadian Council for Accreditation of Pharmacy Programs (CCAPP) or an American pharmacy program accredited by the Accreditation Council for Pharmacy Education (ACPE); or
  - a license to practise pharmacy (any Canadian jurisdiction); or
  - a bachelor's degree, or equivalent, from any international pharmacy school **and** successful completion of the Pharmacy Examining Board of Canada (PEBC) Evaluating Exam.
- Applicants with pharmacy practice experience, including completion of a Year 1 Pharmacy residency program, are preferred. Applicants must also have an equivalent of a University of Toronto B+ (77 to 79%) in the last two years of study and have identified a primary graduate supervisor for the program.

Completion Requirements

- Each student's program will be tailored to suit the student's background and interests and will be planned in consultation with the supervisor and graduate advisory committee, with the approval of the graduate chair.
- Students must complete a minimum of **9.0 full-course equivalents (FCEs)** as follows:
  - 1.5 FCEs in required foundational courses:
    - PHM1141H *Introduction to Education Theory, Practice, and Scholarship*
    - PHM1142H *Methods for Patient-Focused and Pharmacy Practice Research*
    - PHM1143H *Advanced Pharmacy Practice Leadership*
  - 1.5 FCEs in elective courses selected in consultation with the supervisor
  - 3.0 FCEs in clinical practicums:
    - PHM8000Y *MScPhm Clinical Practicum I*
    - PHM8100Y *MScPhm Clinical Practicum II*
  - research project (3.0 FCEs): PHM9000Y *MScPhm Research Practicum*.
- Graduate advisory committee meetings will be held at minimum once each year.
- One **poster presentation** given to all faculty and graduate students at Graduate Research in Progress (GRIP).
- Annual attendance at GRIP.
- Regular attendance at the graduate departmental and student group seminars — two years for full-time students and four years for part-time students.
- An **annual oral presentation** of the student's own research work is given in the student seminar series.
- An **oral presentation** of the completed research work will be submitted and assessed at an oral examination.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 12 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Pharmaceutical Sciences: Pharmaceutical Sciences MSc, PhD Courses

Please consult the department's timetable for courses offered in a given year.

Course Code	Course Title
PHM1109H	Recent Developments in Dosage Form Design
PHM1115H	Special Topics in Radiopharmaceuticals II
PHM1130H	Biomolecular Interactions and Thermodynamics I
PHM1133H	Special Topics in Pharmaceutical Sciences Reading Course
PHM1135H	Nanomedicines in Oncology
PHM1136H	Introduction to Biostatistics
PHM1137H	Introduction to Qualitative Research Methods in the Health Sciences
PHM1138H	Electronics for Pharmaceutics Applications
PHM1139H	Diagnosing Corruption in the Health Sector and Anti-Corruption Policies and Tools
PHM1140H	Principles of Synthetic Biology
PHM1141H	Introduction to Education Theory, Practice and Scholarship
PHM1142H	Methods for Patient-Focused and Pharmacy Practice Research
PHM1143H	Advanced Pharmacy Practice Leadership
PHM1144H	Introduction to Mixed Methods for Health Services and Policy Research and Pharmaceutical Sciences
PHM1145H	Introduction to Scoping Reviews in Health Sciences
PHM1146H	Introduction to Linear Regression Models
PHM1147H	Introduction to Nucleic Acid Medicines
PHM1148H	Introduction to Pharmacokinetics and its Applications in Modeling
PHM1149H	Introduction to Fundamentals of Drug Discovery
PHM2100H	Pharmaceutical Sciences Module: Sciences in New Drugs and Biologics
PHM2101H	Pharmaceutical Sciences Module: Precision in Vitro Diagnostics
PHM2103H	Pharmaceutical Sciences Module: Addictive Medications — Issues and Insights
PHM2104H	Pharmaceutical Sciences Module: Advances in Sensory Neuroscience
PHM2105H	Pharmaceutical Sciences Module: Program Design and Evaluation in Pharmacy
PHM2106H	Pharmaceutical Sciences Module: Spectroscopy: Absorption and Fluorescence
PHM2107H	Pharmaceutical Sciences Module: Organizational Theory and Human Resource Management in Pharmacy I
PHM2108H	Pharmaceutical Sciences Module: Organizational Theory and Human Resource Management in Pharmacy II
PHM2109H	Pharmaceutical Sciences Module: Clinical Pharmacology of Addictions
PHM2110H	Pharmaceutical Sciences Module: The Biophysical Chemistry of Lipid Membranes
PHM2111H	Pharmaceutical Sciences Module: Introduction to Pharmacoepidemiology
PHM2112H	Pharmaceutical Sciences Module: Introduction to Entrepreneurial Strategy in Life Sciences
JFK1122H	Drug Transport Across Biological Membranes
JNP1017H	Current Topics in Molecular and Biochemical Toxicology
JNP1018H	Molecular and Biochemical Basis of Toxicology
JNP1019H	Biomedical Toxicology
JNP1020H	Interdisciplinary Toxicology
JRH1000H	Introduction to Pharmacoepidemiology
JRH5124H	Public Health Ethics
PAS3700H	Multidisciplinary Aspects of Addictions
PCL1004Y	Clinical Pharmacology
PPG2010H	Panel Data Methods for Public Policy Analysis

Pharmaceutical Sciences: Pharmacy MScPhm Courses

Required Foundational Courses

Course Code	Course Title
PHM1141H	Introduction to Education Theory, Practice, and Scholarship
PHM1142H	Methods for Patient-Focused and Pharmacy Practice Research
PHM1143H	Advanced Pharmacy Practice Leadership

Practica and Research Project

Course Code	Course Title
PHM8000Y	MScPhm Clinical Practicum I
PHM8100Y	MScPhm Clinical Practicum II
PHM9000Y	MScPhm Research Practicum

Elective Courses

Course Code	Course Title
PHM1115H	Special Topics in Radiopharmaceuticals II
PHM1133H	Special Topics in Pharmaceutical Sciences Reading Course
PHM1136H	Introduction to Biostatistics
PHM1137H	Introduction to Qualitative Research Methods in the Health Sciences
PHM1138H	Electronics for Pharmaceutics Applications
PHM1144H	Introduction to Mixed Methods for Health Services and Policy Research and Pharmaceutical Sciences
PHM1145H	Introduction to Scoping Reviews in Health Sciences
PHM1147H	Introduction to Nucleic Acid Medicines
AGE2000H	Principles of Aging
HAD5746H	Quantitative Methods in HSR II
JNP1019H	Biomedical Toxicology
JNP1020H	Interdisciplinary Toxicology
JRH1000H	Introduction to Pharmacoepidemiology
JRH5124H	Public Health Ethics
PAS3700H	Multidisciplinary Aspects of Addictions
PCL1004Y	Clinical Pharmacology

Pharmacology and Toxicology

Pharmacology and Toxicology: Introduction

Faculty Affiliation

Medicine

Degree Programs

Pharmacology

MSc

- Field:
  - Applied Clinical Pharmacology

PhD

Combined Degree Programs

MD / PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Addiction Studies**
  - Pharmacology, MSc, PhD
- **Cardiovascular Sciences**
  - Pharmacology, MSc, PhD
- **Musculoskeletal Science**s
  - Pharmacology, MSc, PhD
- **Neuroscience**
  - Pharmacology, MSc, PhD
- **Resuscitation Sciences** (admissions have been administratively suspended)
  - Pharmacology, MSc, PhD
- **Toxicology**
  - Pharmacology, MSc, PhD
- **Women's Health**
  - Pharmacology, MSc, PhD

Overview

Faculty in the Department of Pharmacology and Toxicology conduct research in the following areas:

- biochemical and molecular pharmacology
- cardiovascular pharmacology
- clinical pharmacology
- drug addiction
- drug metabolism, distribution, and pharmacokinetics
- endocrine pharmacology
- immunopharmacology
- neuropharmacology
- pharmacogenetics
- psychopharmacology
- receptor pharmacology
- second messengers and signal transduction
- toxicology

Contact and Address

Web: www.pharmtox.utoronto.ca
Email: pharmtox.dept@utoronto.ca
Telephone: (416) 978-3851

Department of Pharmacology and Toxicology
University of Toronto
777 Bay Street, Suite 945
Toronto, Ontario M5G 2C8 Canada

Pharmacology and Toxicology: Graduate Faculty

Full Members

Al-awar, Rima - PhD
Andreazza, Ana Cristina - BPhm, MSc, PhD, PhD
Banasr, Mounira - PhD
Beaulieu, Martin - PhD
Boileau, Isabelle - PhD
Brands, Bruna - PhD
Cherney, David - MD, PhD
De Luca, Vincenzo - MD, PhD
Di Ciano, Patricia - PhD
Dunkley, Benjamin - BSc, PhD
Edgar, Landon - PhD
Eubanks, James - AA, BSc, PhD
George Bahl, Susan - MD
Goldstein, Benjamin - MD
Grant, Denis - BSc, PhD
Hahn, Margaret - DrMed, PhD
Hampson, David - BSc, MSc, PhD
Hassan, Ahmed - MBBS
Hubbard, Basil - PhD
Kolla, Nathan - BA, MA, MD, PhD
Lanctot, Krista - MSc, PhD
Le Foll, Bernard - MSc, DrMed, PhD
Le, Dzung - PhD
Liu, Fang - PhD
Liu, Geoffrey - BSc, MD, MSc
McIntyre, Roger - MD
McPherson, J. Peter - MSc, PhD ***(Coordinator of Graduate Studies)***
Mitchell, Jane - BSc, PhD
Mueller, Daniel - MD
Ortiz, Abigail - MSc, MD
Pang, Sandy - BSc, BSc, PhD, PhD

Parker, John - BA, MD
Petronis, Arturas - MD
Pollock, Bruce - BSc, MD, PhD
Ramsey, Amy - PhD
Ravindran, Arun - PhD
Riddick, David - BSc, PhD
Ross, Ruth Alexandra - PhD
Roy, Peter John - BSc, PhD
Salahpour, Ali - PhD ***(Chair and Graduate Chair)***
Salmena, Leonardo - PhD
Schapira, Matthieu - MChem, PhD
Schimmer, Bernard - BS, PhD
Sloan, Matthew - MD, MSc
Swardfager, Walter - PhD
Tyndale, Rachel - PhD
Uetrecht, Jack - BSc, MD, MSc, PhD
Vedadi, Masoud - PhD
Verma, Subodh - MD, MSc, PhD
Wells, Peter - BScPhm
Woo, Minna - MD
Young, Trevor - MSc, MD, PhD
Zawertailo, Laurie Anne - PhD

Members Emeriti

Kish, Stephen John - BSc, MSc, PhD
Okey, Allan - BSc, MSc, PhD
Pace-Asciak, Cecil - PhD

Associate Members

Arnot, Michelle - PhD
Barsyte-Lovejoy, Dalia - PhD
Galea, Liisa - BSc, AM
Halabelian, Levon Chant - PhD
Hamadanizadeh, Anita - PhD
Harding, Rachel - PhD
Hess, David - PhD
Husain, Muhammad Ishrat - MBBS
Laposa, Rebecca - PhD
Lewis, Tamorah - MD, DPH
Minian, Nadia - BA, MA, MPH, PhD
Mittmann, Nicole - PhD
Prevot, Thomas - MSc, PhD
Reed, Mark - PhD
Shram, Megan - PhD
Sun, Hong-Shuo - MSc, DrMed, DPhil
Wickens, Christine - BSc, MA, PhD
Woodland, Cindy - PhD
Zack, Martin - BSc, MASc, PhD
Zheng, Chao - BSc, PhD

Pharmacology and Toxicology: Pharmacology MSc

In the **Master of Science (MSc)** program, students are expected to undertake self-directed study and demonstrate proficiency in pharmacological principles throughout the course of the program. They are able to engage in one of two formats of study: 1) thesis-based study or 2) course-based study in the field of Applied Clinical Pharmacology (ACP).

In the thesis-based study, students are expected to think critically about scientific issues and develop a knowledge base in pharmacology while formulating hypotheses in a specific area of pharmacological research. They will test their hypotheses through active research and present their investigations in a thesis.

The thesis-based MSc program can be taken on a full-time or part-time basis.

MSc Program (Thesis-Based Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Pharmacology and Toxicology's additional admission requirements stated below.
- Appropriate bachelor's degree from a recognized university with a final-year average of at least a B+.
- Applicants are normally required to have taken courses in physiology, biochemistry, or applied sciences sufficient to form a foundation for their work in pharmacology.
- All successful applicants are responsible for obtaining research supervision and financial support before they are permitted to officially register in their program.

Completion Requirements

- **Coursework.** Students must successfully complete 0.75 full-course equivalent (FCE) as follows:
  - PCL3000H *Foundational Pharmacology Principles*
  - PCL3001H *Pharmacology Research and Communication Skills* in Year 1
  - 0.25 elective FCE.
- Each student will present a **departmental seminar** after approximately one year in the program.
- Each student will participate in a research program and present the results of the investigation as a **written thesis**. The thesis will be evaluated and defended to the satisfaction of a thesis examination committee.
- MSc students in pharmacology who intend to continue their studies in the PhD program may choose to be evaluated during their MSc **oral defence**.
- Minimum period of one full year of **residence**, during which time the student is required to be on campus full-time and consequently in such geographical proximity as to be able to participate fully in the department's activities associated with the program.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 9 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Pharmacology and Toxicology: Pharmacology MSc; Field: Applied Clinical Pharmacology

In the **Master of Science (MSc)** program, students are expected to undertake self-directed study and demonstrate proficiency in pharmacological principles throughout the course of the program. They are able to engage in one of two formats of study: 1) thesis-based study or 2) course-based study in the field of Applied Clinical Pharmacology (ACP).

In the course-based Applied Clinical Pharmacology (ACP) field, students will engage in integrated coursework featuring a breadth of fundamental and applied pharmacology topics and will participate in a clinical research project. The practicum opportunity additionally provides hands-on training in academic, commercial, health care, and/or government settings.

The course-based ACP field does not have a part-time option.

MSc Program: Applied Clinical Pharmacology Field (Course-Based Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Pharmacology and Toxicology's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with a final-year average of at least a B+.
- Applicants are normally required to have taken courses in physiology and biochemistry, or applied sciences sufficient to form a foundation for their work in pharmacology.

Completion Requirements

Coursework. Students must successfully complete a total of **8.0 full-course equivalents (FCEs)**. The curriculum is designed in an integrated fashion such that each subsequent course reinforces and builds upon prior knowledge. Students are expected to complete the required courses in Year 1. Elective courses may be taken in either year with practicum opportunities offered following successful completion of the required courses.

- **Year 1 required courses (5.5 FCEs);** these courses are spread throughout the first 12 months of the program:
  - PCL1004Y *Clinical Pharmacology*
  - PCL1100H *Applied Skills in Clinical Pharmacology*
  - PCL1300H *Selected Topics in Clinical Pharmacology*
  - PCL1400H *Systems Pharmacology I*
  - PCL1402H *Pharmacology and Toxicology in Drug Development*
  - PCL1491H *Clinical Pharmacology: Principles in Practice*
  - PCL1500H *Systems Pharmacology II*
  - PCL2200Y *Major Research Project*
  - PCL3302H *Ethical Considerations and Regulatory Affairs in Drug Development*
  - PCL3303H *Statistics, Bioinformatics, and AI in Clinical Pharmacology*.

Plus

- **Elective courses (2.5 FCEs).** Elective coursework is selected through consultation with the program director with the intention to allow individual students to tailor their degree towards their interests (e.g., behavioural pharmacology, toxicology) and career goals. Popular elective courses include:
  - PCL2100Y *Practicum in Clinical Pharmacology*
  - PCL2101Y *Practicum in Clinical Pharmacology I*
  - PCL2102Y *Practicum in Clinical Pharmacology II*
  - PCL2201Y *Research Project Extended Study*
  - PCL3100H *Behavioural Pharmacology I*
  - PCL3101H *Behavioural Pharmacology II*
  - JNP1019H *Biomedical Toxicology*
  - JNP1020H *Interdisciplinary Toxicology*
  - PCL3301H *Introductory Concepts in Clinical Pharmacology*
  - APS1001H *Project Management*
  - CHL5201H *Biostatistics I*
  - RSM2017H *Pharmaceutical Strategy*.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

MSc Program: Applied Clinical Pharmacology Field (Course-Based, Advanced-Standing Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Pharmacology and Toxicology's additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university with a final-year average of at least a B+.
- Applicants are normally required to have taken courses in physiology and biochemistry, or applied sciences sufficient to form a foundation for their work in pharmacology.
- At the discretion of the program director, applicants who demonstrate advanced pharmacology knowledge that significantly overlaps with the Applied Clinical Pharmacology curriculum **may be considered** for advanced standing with either:
  - a bachelor's degree specializing in pharmacology or biomedical toxicology **or**
  - a professional degree (MD or PharmD) with coursework in pharmacology.

Completion Requirements

Coursework. Students must complete **at least 4.0 full-course equivalents (FCEs)** as follows:

- PCL1004Y *Clinical Pharmacology*.

- PCL1100H *Applied Skills in Clinical Pharmacology*.
- PCL1300H *Selected Topics in Clinical Pharmacology and Toxicology*.
- PCL2200Y *Major Research Project*, starting in the Fall of Year 1.
- PCL3302H *Ethical Considerations and Regulatory Affairs in Drug Development*.
- PCL3303H *Statistics, Bioinformatics, and AI in Clinical Pharmacology*.
- At least 0.5 FCE in elective coursework recommended and approved by the program director. (Elective coursework is selected through consultation with the program director with the intention to allow individual students to tailor their degree towards their interests and career goals. Students in the advanced-standing option are not eligible to participate in a practicum course.)

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

Pharmacology and Toxicology: Pharmacology PhD

The objective of the **Doctor of Philosophy (PhD) degree** is to have students possess a comprehensive understanding of the general area of pharmacology, in addition to specific expertise in their particular area of interest. They build on their knowledge of pharmacology so that they are able to think critically about specific areas in pharmacology. They should be able to formulate and design, as well as carry out and interpret investigations. Their findings should be publishable. They should show capacity for continuing significant contributions in pharmacology and for conducting independent research.

Applicants may enter the PhD program via one of three routes: 1) following completion of an appropriate master's degree; 2) transfer from the University of Toronto MSc program; or 3) direct entry following completion of an appropriate bachelor's degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Pharmacology and Toxicology's additional admission requirements stated below.
- Appropriate master's degree from a recognized university with an average of at least a B+ in master's degree courses.
- Applicants are normally required to have taken courses in physiology, biochemistry, or applied sciences sufficient to form a foundation for their work in pharmacology.
- The department determines the eligibility of prospective students. The department assesses the student's ability for advanced study and independent research in pharmacology.
- Applicants admitted without prior screening (i.e., with MSc degrees from other departments or universities, and students admitted with a bachelor's degree) will have their research ability reviewed after completion of one year. Upon successful completion of a departmental seminar and recommendation from the student's advisory committee, the student will be permitted to proceed with the PhD program.
- The department must be satisfied about the applicant's background, accomplishments, and financial support.
- All successful applicants are responsible for obtaining research supervision and financial support before they are permitted to officially register in their program.

Completion Requirements

- **Coursework.** Students must complete **3.0 full-course equivalents (FCEs)** as follows:
  - PCL1003Y *Seminars in Pharmacology*
  - PCL3000H *Foundational Pharmacology Principles* in Year 1
  - PCL3001H *Pharmacology Research and Communication Skills* in Year 1
  - PCL3002H *PhD Research Proposal* in Year 1
  - 1.25 FCE (secondary subject).
- Any other courses advised by the Graduate Education Committee. The student's advisory committee should help the student determine the secondary course.
- As part of the course requirement for PCL1003Y *Seminars in Pharmacology*, the student must present thesis material in **seminars** to the department on two occasions, one of which will take place between two and six months prior to the Final Oral Examination.
- Each student will participate in a research program and present the results of the investigation as a **written thesis**. The thesis must be **orally defended** to the satisfaction of a thesis examination committee.
- Minimum period of two full years of **residence**, during which time the student is required to be on campus full-time and consequently in such geographical proximity as to be able to participate fully in the department's activities associated with the program.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- Students transferring from the master's program in Pharmacology to the PhD program may receive full credit for master's courses towards doctoral course requirements, with the department's permission.

Completion Requirements

- **Coursework.** Students must complete **3.0 full-course equivalents (FCEs)** as follows:

    - PCL1003Y *Seminars in Pharmacology*
    - PCL3000H *Foundational Pharmacology Principles* in Year 1
    - PCL3001H *Pharmacology Research and Communication Skills* in Year 1
    - PCL3002H *PhD Research Proposal* in Year 1
    - 1.25 FCE (secondary subject).
- Any other courses advised by the Graduate Education Committee. The student's advisory committee should help the student determine the secondary course.
- As part of the course requirement for PCL1003Y *Seminars in Pharmacology*, the student must present thesis material in **seminars** to the department on two occasions, one of which will take place between two and six months prior to the Final Oral Examination.
- Each student will participate in a research program and present the results of the investigation as a **written thesis**. The thesis must be **orally defended** to the satisfaction of a thesis examination committee.
- Minimum period of two full years of **residence**, during which time the student is required to be on campus full-time and consequently in such geographical proximity as to be able to participate fully in the department's activities associated with the program.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Well-qualified students with excellent research potential holding an appropriate bachelor's degree from a recognized university may be considered for direct entry to the PhD program. These applicants must have achieved a minimum final-year average of A–.

Completion Requirements

- **Coursework.** Students must complete **3.0 full-course equivalents (FCEs)** as follows:
    - PCL1003Y *Seminars in Pharmacology*
    - PCL3000H *Foundational Pharmacology Principles* in Year 1
    - PCL3001H *Pharmacology Research and Communication Skills* in Year 1
    - PCL3002H *PhD Research Proposal* in Year 1
    - 1.25 FCE (secondary subject).
- Any other courses advised by the Graduate Education Committee. The student's advisory committee should help the student determine the secondary course.
- As part of the course requirement for PCL1003Y *Seminars in Pharmacology*, the student must present thesis material in **seminars** to the department on two occasions, one of which will take place between two and six months prior to the Final Oral Examination.
- Each student will participate in a research program and present the results of the investigation as a **written thesis**. The thesis must be **orally defended** to the satisfaction of a thesis examination committee.
- Minimum period of two full years of **residence**, during which time the student is required to be on campus full-time and consequently in such geographical proximity as to be able to participate fully in the department's activities associated with the program.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Pharmacology and Toxicology: Pharmacology MSc, PhD Courses

The department should be consulted each session as to course offerings. Students may also find up-to-date course information on the departmental website.

Course Code	Course Title
PCL1002Y	Graduate Pharmacology
PCL1003Y	Seminars in Pharmacology
PCL1004Y	Clinical Pharmacology
PCL1100H	Applied Skills in Clinical Pharmacology
PCL1101H	Technology, Techniques, and Translation in Pharmacology and Toxicology
PCL1110H	Applied Skills in Clinical Pharmacology
PCL1300H	Selected Topics in Clinical Pharmacology and Toxicology
PCL1400H	Systems Pharmacology I
PCL1402H	Pharmacology and Toxicology in Drug Development
PCL1491H	Clinical Pharmacology: Principles in Practice
PCL1500H	Systems Pharmacology II
PCL2100Y	Practicum in Clinical Pharmacology
PCL2101Y	Practicum in Clinical Pharmacology I
PCL2102Y	Practicum in Clinical Pharmacology II
PCL2200Y	Major Research Project
PCL2201Y	Research Project Extended Study
PCL3000H	Foundational Pharmacology Principles
PCL3001H	Pharmacology Research and Communication Skills
PCL3002H	PhD Research Proposal
PCL3100H	Behavioural Pharmacology I
PCL3101H	Behavioural Pharmacology II

Course Code	Course Title
PCL3301H	Introductory Concepts in Clinical Pharmacology
PCL3302H	Ethical Considerations and Regulatory Affairs in Drug Development
PCL3303H	Statistics, Bioinformatics, and AI in Clinical Pharmacology
CHL5201H	Biostatistics I
JFK1122H	Drug Transport Across Biological Membranes
JNP1016H	Graduate Seminar in Toxicology
JNP1017H	Current Topics in Molecular and Biochemical Toxicology
JNP1018H	Molecular and Biochemical Basis of Toxicology
JNP1019H	Biomedical Toxicology
JNP1020H	Interdisciplinary Toxicology
JNR1444Y	Fundamentals of Neuroscience: Cellular and Molecular
JYG1555H	Advanced Topics: Cellular and Molecular Neurobiology

Philosophy

Philosophy: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Philosophy

MA

- Concentration: Philosophy of Science

PhD

Combined Degree Programs

STG, Law, Juris Doctor / Philosophy, PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Ancient and Medieval Philosophy**
  - Philosophy, PhD
- **Bioethics** (admissions have been administratively suspended)
  - Philosophy, MA, PhD
- **Jewish Studies**
  - Philosophy, MA, PhD
- **Sexual Diversity Studies**
  - Philosophy, MA, PhD
- **Women and Gender Studies**
  - Philosophy, MA, PhD

Overview

Philosophy has been taught at the University of Toronto since 1843. Much has changed in that time, but the department remains Canada's preeminent philosophy department. It is an international leader in the history of philosophy — especially ancient and medieval philosophy — as well as ethics, philosophy of science, and philosophy of mind. In all of these areas, department members take contemporary philosophical problems and their historical antecedents to illuminate one another.

The department's most distinctive strength is its broad coverage of the history of philosophy. While peer departments usually have one or two experts in a few historical periods, U of T has specialists in every area of the history of Western philosophy, as well as in aspects of the history of non-Western philosophy. This historical focus engages with other areas of strength: ethics, philosophy of science, and philosophy of mind.

Many U of T faculty working in these areas also study their history; they use that study to inform their contributions to contemporary debates. At the same time, these historians of philosophy benefit from and contribute to ground-breaking work in systematic philosophy. This integration of historical and systematic philosophy sets this department apart from other top philosophy departments where the history of philosophy is often segregated from the rest of the discipline.

Contact and Address

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Email: graduate.phil@utoronto.ca
Telephone: (416) 978-3312

Department of Philosophy
University of Toronto
Jackman Humanities Building (JHB)
Room 410, 170 St. George Street
Toronto, Ontario M5R 2M8 Canada

Philosophy: Graduate Faculty

Full Members

Ainslie, Donald - BSc, MA, PhD
Allen, James - BA, PhD
Barnett, David - BA, PhD
Barney, Rachel - BA, PhD
Black, Deborah - BA, MA, PhD
Bloom, Paul - BA, PhD
Caie, Michael - PhD
Charlow, Nathan - BA, MA, PhD
Clark, Philip - BA, MA, PhD
Comay, Rebecca - BA, MA, PhD
Das, Nilanjan - BA, MA, PhD
Dickie, Imogen - BA, BPhil, DPhil
Dyzenhaus, David - BA, LLB, DPhil
Franklin-Hall, Andrew - BA, MA, MPH, PhD
Freschi, Elisa - PhD
Ganeri, Jonardon - MMath, DPhil
Gelber, Jessica - PhD
Gerson, Lloyd - BA, MA, PhD, FRSC
Gibbs, Robert - BA, MA, PhD
Heath, Joseph - BA, MA, PhD, FRSC
Hellie, Benj - BA, PhD
Huber, Franz - MA, PhD
King, Peter - BA, PhD
Kingwell, Mark - BA, MA, MPH, DFA, PhD
Kremer, Philip - BS, PhD
Miller, Michael - AB, AM, PhD
Misak, Cheryl - BA, MA, DPhil, FRSC
Moreau, Sophia - BA, BPhil, JD, PhD
Mullin, Amy - BA, PhD
Nagel, Jennifer - BA, MA, PhD
Nefsky, Julia - BA, PhD
Novak, David - AB, PhD
Pasternak, Avia - MPA, PhD

Pfeiffer, Christian Tobias Georg - MPH, PhD ***(Graduate Coordinator)***
Pickavé, Martin - MA, PhD ***(Chair and Graduate Chair)***
Raffman, Diana - BA, PhD, FRSC
Rattan, Gurpreet - BSc, AM, MPH, PhD
Ripstein, Arthur S. - BA, MA, LLM, PhD, Howard Beck, Q.C. Chair ***(Acting Chair and Acting Graduate Chair)***
Rosenthal, Michael - PhD
Rozemond, Marleen - BA, PhD
Sedivy, Sonia - BA, PhD
Sepielli, Andrew - AB, JD, PhD
Smith, Brian Cantwell - BS, MS, PhD
Stang, Nicholas - AB, PhD
Tenenbaum, Sergio - MA, PhD
Walsh, Denis - BA, BSc, MPH, PhD, PhD
Ware, Owen - BA, PhD
Weisberg, Jonathan - BMath, BPhil, PhD
Wilson, Jessica Marie - BA, PhD
Yi, Byeong-Uk - BA, MA, MA, PhD

Members Emeriti

Brown, James - BA, MA, PhD, FRSC
De Sousa, Ronald - BA, PhD, FRSC
Goldstick, Daniel - BA, BPhil, DPhil
Hurka, Thomas - BA, BPhil, DPhil, FRSC
Hutchinson, Douglas S. - BA, BPhil, DPhil
Inwood, Brad - BA, MA, PhD, FRSC
Katz, Bernard - BA, MA, PhD
Lange, Lynda - BA, MA, PhD
Matthen, Mohan - PhD, FRSC
Seager, William Edward - BA, MA, PhD
Stefanovic, Ingrid - BA, MA, PhD

Associate Members

Aronowitz, Sara - PhD
Babic, Boris - JD, PhD
Brown, Brookes - BA, JD, PhD
de Kenessey, Brendan - PhD
Dika, Tarek - MPH, PhD
Goetschel, Willi - PhD
Howard, Nathan - BA, MA, MPH, DPhil
Lee, Andrew - BSc, MA, PhD
Paris, William - MA, PhD
Swarup, Shruta - BA, MA, PhD
Teitel, Trevor - PhD

Philosophy: Philosophy MA

The Master of Arts (MA) program may be taken on a full-time or part-time basis.

Applicants should consult the department's web page for complete details on graduate programs, course offerings, short academic profiles of graduate faculty, and application procedures.

MA Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Philosophy's additional admission requirements stated below.
- Admission requires an appropriate bachelor's degree from a recognized university. Applicants must have a strong background in philosophy (roughly equivalent to an undergraduate major), with an average grade of at least a mid-B in the applicant's overall program and at least an A– in the applicant's philosophy courses.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must complete the Test of English as a Foreign Language (TOEFL) with the following minimum scores:
  - Paper-based TOEFL exam: 600 and 5 on the Test of Written English (TWE).
  - Internet-based TOEFL exam: 100/120 and 22/30 on the writing and speaking sections.
- Equivalent results in some other recognized test of English-language proficiency are acceptable.

Completion Requirements

- **Coursework.** Students must successfully complete **3.5 full-course equivalents (FCEs)** in philosophy as follows:
  - At least 1.0 FCE in the history of philosophy.
  - At least 1.0 FCE in the problems of philosophy.
  - 1.0 FCE designated courses only for MA students. One 0.5 FCE in the broad area of ethics/politics and the other 0.5 FCE in the broad area of metaphysics and epistemology. Either could be historical. The timing of the course requirement is:
    - PHL2222H *MA Proseminar I*, taken in the first session.
    - PHL2223H *MA Proseminar II*, taken in the second session.
  - PHL3000H *MA Professional Development Workshop*.
- Each MA student is assigned an advisor who will recommend a suitable program of philosophy courses. The student's choice of courses must be approved by the department.
- It is possible for a full-time student to complete all requirements for the MA degree in the Fall and Winter sessions; however, the department encourages students to take no more than 3.0 FCEs during the Fall and Winter sessions and to complete the last course during the Summer session.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 5 years part-time (typical registration sequence: FWS)
Time Limit: 3 years full-time; 6 years part-time

Philosophy: Philosophy MA Concentration: Philosophy of Science

The Philosophy of Science concentration will provide students with a background in general philosophy of science and with specific topics in philosophy of science. Students will be prepared for academic work at the PhD level in philosophy and for non-academic career tracks that require strong critical thinking skills, as well as an understanding of science and its role in knowledge and society.

MA Program; Concentration: Philosophy of Science

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Philosophy's additional admission requirements stated below.
- Admission requires an appropriate bachelor's degree from a recognized university. Applicants must have a strong interest in:
  - Philosophy (evidenced in a strong writing sample, personal statement, and letters of reference).
  - A strong academic background in either philosophy or, typically, a subject in the natural and social sciences, with minimum average grades of A–.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must complete the Test of English as a Foreign Language (TOEFL) with the following minimum scores:
  - Paper-based TOEFL exam: 600 and 5 on the Test of Written English (TWE).
  - Internet-based TOEFL exam: 100/120 and 22/30 on the writing and speaking sections.
- Equivalent results in some other recognized test of English-language proficiency are acceptable.

Completion Requirements

- **Coursework.** Students must successfully complete **3.5 full-course equivalents (FCEs)** including:
  - PHL2198H *Advanced Introduction to the Philosophy of Science*
  - 1.5 FCE in graduate seminars in philosophy of science or cognate areas of philosophy such as logic, philosophy of language, epistemology, metaphysics, or philosophy of mind.
  - 1.0 FCE in graduate courses in the history and philosophy of science and technology (HPS) such as HPS1000H, HPS2009H, HPS 2010H, HPS3004H, HPS3010H, HPS4001H. A list of recommended HPS courses will be prepared and shared annually on the Department of Philosophy's graduate courses web page. Students will have the opportunity to request other HPS electives that reflect their specific research interests.
  - PHL3000H *MA Professional Development Workshop*.
- Each MA student is assigned an advisor who will recommend a suitable program of philosophy courses. The student's choice of courses must be approved by the department.
- It is possible for a full-time student to complete all requirements for the MA degree in the Fall and Winter sessions; however, the department encourages students to take no more than 3.0 FCEs during the Fall and Winter sessions and to complete the last course during the Summer session.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 5 years part-time
Time Limit: 3 years full-time; 6 years part-time

Philosophy: Philosophy PhD

The PhD program has two options: a five-year option and a four-year option. The five-year option is the most common and is the only direct-entry option for students with a bachelor's degree. The five-year option provides five years of funding and requires two years of coursework, while the four-year option provides four years of funding and requires one year of coursework. The program requirements are summarized below.

Students enrolled in graduate programs in philosophy in other universities are welcome to apply to spend a year studying at the University of Toronto. Please direct any inquiries to the Director of Graduate Studies.

Students who wish to take, for credit, one or more of the courses offered by the department as non-degree students, should apply for admission as Special Students. The application procedures and deadlines are the same as those for the MA program.

Applicants should consult the department's web page for complete details on graduate programs, course offerings, short academic profiles of graduate faculty, and application procedures.

PhD Program

Minimum Admission Requirements

- Applicants approved by the department are admitted under the General Regulations of the School of Graduate Studies.
- Applicants should have a master's degree in philosophy from a recognized university with an average grade of at least an A– in the applicant's overall program. Applicants must satisfy the department that they are capable of independent research in philosophy at an advanced level.
- Applicants whose primary language is not English and who are not graduates of a university whose language of instruction is English must complete the Test of English as a Foreign Language (TOEFL) with the following minimum scores:
  - Paper-based TOEFL exam: 600 and 5 on the Test of Written English (TWE).

    - Internet-based TOEFL exam: 100/120 and 22/30 on the writing and speaking sections.
- Equivalent results in some other recognized test of English-language proficiency are acceptable.

Completion Requirements

- **Course Requirements.** Students must complete a minimum of **3.0 full-course equivalents (FCEs)** in philosophy, with a minimum A– average by the end of Year 1 including:
    - At least 1.0 FCE which must comprise courses from philosophical traditions from different geographical regions and/or different historical periods.
    - At least 1.0 FCE which must comprise problems of philosophy courses.
    - The proseminar in philosophy (PHL1111H) worth 0.5 FCE during the Fall session of Year 1.
    - With the department's permission, a student may replace up to 1.0 FCE in philosophy with graduate courses offered by another department, provided that the courses are required for the student's planned research.
- **Breadth Requirement**. A student must demonstrate competence in at least six areas of philosophy, including the following:
    - Each of the following three areas in the problems of philosophy:
        - Contemporary issues in metaphysics, epistemology, and philosophy of science.
        - Contemporary issues in values (ethics, politics, aesthetics, and philosophy of religion).
        - Contemporary issues in mind, language, and logic.
    - The remaining three areas must be chosen from philosophical traditions from different geographical regions such as South Asian or East Asian philosophy, and/or different historical periods such as Medieval or Twentieth-Century philosophy.
    - Competence in any area is normally established by successful completion of a graduate 0.5 FCE in that area.
    - A student must also demonstrate competence in logic (defined as proficiency in first-order symbolic logic with identity). This competence is expected of all students prior to beginning doctoral studies. Where this is not the case, competence must be acquired as a supplement to the required number of courses and be demonstrated to the satisfaction of the department by the time the qualifying requirement is met.
- **Revision Paper Requirement.** To be satisfied either sometime during coursework or in the summer immediately following coursework. Students will designate a particular paper typically written during coursework as their revision paper and will solicit supervision on the revision of the paper from a faculty member. Students will receive verbal and written feedback on their paper from their faculty supervisor and will revise their paper in light of this feedback. A second round of feedback and revision may be sought by the student or the faculty supervisor, after which time the student will again revise and submit. Students should plan to complete the requirement over one or two months depending on whether one or two rounds of revision are undertaken.
- **Qualifying Requirement**. After completing all course requirements, the student selects a thesis committee that will oversee his or her academic progress through the final thesis defence. The student meets with the committee to discuss a tentative thesis topic, construct an appropriate research reading list, and receive guidance on writing a qualifying paper. After submitting the qualifying paper and making any required adjustments to the reading list, the student takes a two-part (written and oral) qualifying examination based on the paper and the reading list. The paper will be submitted and written and oral exams taken four to six weeks later, during the Winter session of Year 2.
- **Thesis Proposal Requirement.** To be satisfied at the September meeting of the student and their dissertation committee. The proposal can take many forms and could, for example, proceed by indicating chapters, problems, and literature, and/or theses that will organize, be discussed, or be argued for in the dissertation. Committees will then give feedback on the overall plan. The length of the proposal will vary from committee to committee but as a rough guideline, the proposal may comprise a document of three to five pages.
- **Research Tools Requirement**. Each PhD student must demonstrate competence in at least one research tool. A research tool may be one of the following:
    - Reading knowledge of a language other than English.
    - Familiarity with a discipline other than philosophy (e.g., linguistics, psychology, or mathematics).
    - Mastery of research methods not typical in philosophy (e.g., statistical methods).
    - The research tool will be determined by the Graduate Coordinator in consultation with the student's thesis committee.
- **Thesis**. A candidate must submit a thesis on an approved subject and defend the thesis at a Doctoral Final Oral Examination. The department is not obligated to provide supervision in areas falling outside the competency, interest, or availability of its graduate faculty.
- **Residence**. Students must be registered as full-time, on-campus students and must reside in sufficient geographical proximity to enable them to fulfil the course, breadth, qualifying, and language requirements set by the department in a smooth and timely fashion. They are also expected to participate fully in departmental activities. While writing the thesis, candidates are expected to be in residence, with the exception of absence for research.
- **Normal Timeline Through the Program**. By the end of Year 1 of registration, students should have completed all the course requirements for the degree. By the end of the following year of registration, all students should have satisfied any remaining breadth requirements, selected a thesis committee, and passed the qualifying examination. (These are general deadlines; consult the department's web page for specific dates and further details.) Thereafter, the candidate selects a member of the thesis committee to be the thesis supervisor and begins work on the thesis, which he or she is expected to finish within two years.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants approved by the department are admitted under the General Regulations of the School of Graduate Studies.
- Applicants should have an appropriate bachelor's degree from a recognized university; a strong background in philosophy (roughly equivalent to an undergraduate major); and an average grade of at least a B+ in the overall program and at least an A– in philosophy courses.
- Applicants whose primary language is not English and who are not graduates of a university whose language of instruction is English must complete the Test of English as a Foreign Language (TOEFL) with the following minimum scores:
  - Paper-based TOEFL exam: 600 and 5 on the Test of Written English (TWE).
  - Internet-based TOEFL exam: 100/120 and 22/30 on the writing and speaking sections.
- Equivalent results in some other recognized test of English-language proficiency are acceptable.

Completion Requirements

- **Course Requirements.** Students must take a minimum of **6.0 full-course equivalents (FCEs)** in philosophy, with an average grade of at least an A– including:
  - At least 2.0 FCEs which must comprise courses from philosophical traditions from different geographical regions such as South Asian or East Asian philosophy, and/or different historical periods such as Medieval or Twentieth-Century philosophy.
  - At least 2.0 FCEs which must comprise problems of philosophy courses.
  - The proseminar in philosophy (PHL1111H) worth 0.5 FCE during the Fall session of Year 1.
  - With the department's permission, a student may replace up to 1.0 FCE in philosophy with graduate courses offered by another department, provided that the courses are required for the student's planned research.
  - To remain in good standing, students must complete 3.0 FCEs with an A– average by the end of Year 1, and 6.0 FCEs with an A– average by the end of Year 2.
- **Breadth Requirement**. A student must demonstrate competence in at least six areas of philosophy, including the following:
  - Each of the following three areas in the problems of philosophy:
    - Contemporary issues in metaphysics, epistemology, and philosophy of science.
    - Contemporary issues in values (ethics, politics, aesthetics, and philosophy of religion).
    - Contemporary issues in mind, language, and logic.
  - The remaining three required areas must be chosen from philosophical traditions from different geographical regions such as South Asian or East Asian philosophy, and/or different historical periods such as Medieval or Twentieth-Century philosophy.
  - Competence in any area is normally established by successful completion of a graduate 0.5 FCE in that area.
  - A student must also demonstrate competence in logic (defined as proficiency in first-order symbolic logic with identity). This competence is expected of all students prior to beginning doctoral studies. Where this is not the case, competence must be acquired as a supplement to the required number of courses and be demonstrated to the satisfaction of the department by the time the qualifying requirement is met.
- **Revision Paper Requirement.** To be satisfied either sometime during coursework or in the summer immediately following coursework. Students will designate a particular paper typically written during coursework as their revision paper and will solicit supervision on the revision of the paper from a faculty member. Students will receive verbal and written feedback on their paper from their faculty supervisor and will revise their paper in light of this feedback. A second round of feedback and revision may be sought by the student or the faculty supervisor, after which time the student will again revise and submit. Students should plan to complete the requirement over one or two months depending on whether one or two rounds of revision are undertaken.
- **Qualifying Requirement**. After completing all course requirements, the student selects a thesis committee that will oversee his or her academic progress through the final thesis defence. The student meets with the committee to discuss a tentative thesis topic, construct an appropriate research reading list, and receive guidance on writing a qualifying paper. After submitting the qualifying paper and making any required adjustments to the reading list, the student takes a two-part (written and oral) qualifying examination based on the paper and the reading list. The paper will be submitted and written and oral exams taken four to six weeks later, during the Winter session of Year 3.
- **Thesis Proposal Requirement.** To be satisfied at the September meeting of the student and her dissertation committee. The proposal can take many forms and could, for example, proceed by indicating chapters, problems, and literature, and/or theses that will organize, be discussed, or be argued for in the dissertation. Committees will then give feedback on the overall plan. The length of the proposal will vary from committee to committee but as a rough guideline, the proposal may comprise a document of three to five pages.
- **Research Tools Requirement**. Each PhD student must demonstrate competence in at least one research tool. A research tool may be one of the following:
  - Reading knowledge of a language other than English.
  - Familiarity with a discipline other than philosophy (e.g., linguistics, psychology, or mathematics).
  - Mastery of research methods not typical in philosophy (e.g., statistical methods).
  - The research tool will be determined by the Graduate Coordinator in consultation with the student's thesis committee.

- **Thesis**. A candidate must submit a thesis on an approved subject and defend the thesis at a Doctoral Final Oral Examination. The department is not obligated to provide supervision in areas falling outside the competency, interest, or availability of its graduate faculty.
- **Residence**. Students must be registered as full-time, on-campus students and must reside in sufficient geographical proximity to enable them to fulfil the course, breadth, qualifying, and language requirements set by the department in a smooth and timely fashion. They are also expected to participate fully in departmental activities. While writing the thesis, candidates are expected to be in residence, with the exception of absence for research.
- **Normal Timeline Through the Program**. By the end of Year 2 of registration, students should have completed all course requirements for the degree. By the end of the following year of registration, all students should have satisfied any remaining breadth requirements, selected a thesis committee, and passed the qualifying examination. (These are general deadlines; consult the department's web page for specific dates and further details.) Thereafter, the candidate selects a member of the thesis committee to be the thesis supervisor and begins work on the thesis, which he or she is expected to finish within two years.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Philosophy: Philosophy MA, PhD Courses

Not all courses are offered every year. Please consult the department's website, which lists the courses the department will offer this year as well as those offered by other departments that may be taken for philosophy credit.

Required Courses

Course Code	Course Title
PHL1111H	PhD Proseminar
PHL2222H	MA Proseminar I
PHL2223H	MA Proseminar II
PHL3000H	MA Professional Development Workshop

Concentration: Philosophy of Science

Course Code	Course Title
PHL2198H	Advanced Introduction to the Philosophy of Science

Reading Courses

Course Code	Course Title
PHL1000H	Reading Course
PHL1000Y	Reading Course
PHL1001H	Reading Course
PHL1001Y	Reading Course
PHL1500H	Reading Course
PHL1500Y	Reading Course

History of Philosophy

Classical Greek and Roman Philosophy

Course Code	Course Title
PHL2000H	Early Greek Philosophy
PHL2002H	Plato
PHL2003H	Aristotle
PHL2005H	Seminar in Plato
PHL2007H	Seminar in Aristotle
PHL2009H	Seminar in Greek Philosophy
PHL2010H	Late Greek Philosophy

East Asian Philosophy

Course Code	Course Title
PHL2013H	Topics in Chinese Philosophy
PHL2014H	Topics in Chinese Moral Psychology
PHL2016H	Taoism: Philosophy and Religion

South Asian Philosophy

Course Code	Course Title
PHL2018H	South Asian Philosophy
PHL2019H	Topics in South Asian Philosophy

Medieval Philosophy

Course Code	Course Title
MST3301H	Themes in Medieval Philosophy
MST3309H	Birth of the Will: Augustine and Anselm
MST3311H	Topics in Medieval Metaphysics
MST3322H	William of Ockham
MST3327H	Free Will and Human Action in Medieval Philosophy
MST3346H	Medieval Islamic Philosophy

Early Modern Philosophy

Course Code	Course Title
PHL2051H	The Rationalists
PHL2055H	The Empiricists
PHL2057H	Seminar in Seventeenth-and Eighteenth-Century Philosophy
PHL2063H	Kant's Ethics

Feminist Philosophy

Course Code	Course Title
PHL2140H	Topics in Feminist Philosophy

Nineteenth- and Twentieth-Century Philosophy

Course Code	Course Title
PHL2070H	Topics in Philosophy of Race
PHL2076H	Hegel
PHL2078H	Kierkegaard
PHL2079H	Marxist Philosophy
PHL2084H	Seminar in Nineteenth-Century Continental Philosophy
PHL2085H	Husserl
PHL2088H	Heidegger
PHL2089H	Seminar in Twentieth-Century Continental Philosophy
PHL2090H	Hermeneutics
PHL2091H	The Critical Theory of Society
PHL2093H	Frege
PHL2094H	Russell
PHL2095H	Wittgenstein
PHL2097H	Later Analytic Philosophy
PHL2192H	Seminar in Analytic Philosophy
PHL2193H	Topics in Analytic Philosophy

History and Philosophy of Science and Technology

For MA students in the Philosophy of Science concentration.

Course Code	Course Title
HPS2000H	History of Mathematics
HPS2001H	History of Physics
HPS2003H	History of Biology
HPS2004H	History of Medicine
HPS2008H	History of Psychology
HPS2009H	History and Philosophy of the Social Sciences

Problems of Philosophy

Metaphysics and Epistemology

Course Code	Course Title
PHL2101H	Seminar in Metaphysics
PHL2105H	Topics in Metaphysics
PHL2111H	Seminar in Epistemology
PHL2115H	Topics in Epistemology
PHL2117H	Formal Epistemology
PHL2119H	Philosophical Foundations of Multidisciplinary Studies
PHL2171H	Philosophy of Mind
PHL2172H	Seminar in Philosophy of Mind
PHL2175H	Philosophy of Perception

Logic and the Philosophy of Language

Course Code	Course Title
PHL2120H	Introductory Mathematical Logic
PHL2122H	Advanced Logic

Course Code	Course Title
PHL2124H	Seminar in Logic
PHL2125H	Many Valued and Modal Logics
PHL2126H	Philosophy of Logic
PHL2127H	Philosophy of Mathematics
PHL2130H	Topics in Informal Logic
PHL2137H	Philosophy of Action
PHL2190H	Philosophy of Language
PHL2191H	Seminar in the Philosophy of Language
PHL2197H	Foundations of Computation and Information

Value Theory

Course Code	Course Title
PHL2131H	Ethics
PHL2132H	Seminar in Ethics
PHL2133H	Topics in Ethics
PHL2135H	Metaethics
PHL2141H	Political Philosophy
PHL2142H	Seminar in Political Philosophy
PHL2143H	Social Philosophy
PHL2144H	Seminar in Social Philosophy
PHL2145H	Bioethics
PHL2146Y	Topics in Bioethics
PHL2148H	Philosophy of Law
JPL2149H	Legal Theory
PHL2151H	Aesthetics
PHL2152H	Philosophy and Teaching

Philosophy of Science

Course Code	Course Title
JPH2194H	Topics in the History of the Philosophy of Science
PHL2195H	Philosophy of Biology
PHL2196H	Topics in the Philosophy of Science
PHL2198H	Advanced Introduction to the Philosophy of Science
PHL2199H	Seminar in the Philosophy of Science
PHL2200H	Philosophy of Physics

Miscellaneous

Course Code	Course Title
PHL3101H	Intensive Special Course
PHL4900H	Research Seminar
PHL4901H	Revision Paper Requirement

Physical and Environmental Sciences

Physical and Environmental Sciences: Introduction

Faculty Affiliation

University of Toronto Scarborough (UTSC)

Degree Programs

Environmental Science

MEnvSc

- Fields:
  - Climate Change Impacts and Adaptation;
  - Conservation and Biodiversity;
  - Terrestrial and Aquatic Systems

MSc

PhD

- Concentrations:
  - Climate Change and the Environment;
  - Contaminant Flux;
  - Environmental Science in Transitional Economies;
  - Great Lakes Ecosystems;
  - Remediation and Restoration of Degraded Environmental Systems;
  - Urban Geoscience

Combined Degree Programs

- UTSC, Conservation and Biodiversity (Specialist), HBSc / MEnvSc
- UTSC, Environmental Chemistry (Specialist), HBSc / MEnvSc
- UTSC, Environmental Chemistry (Specialist Co-op), HBSc / MEnvSc
- UTSC, Environmental Geoscience (Specialist), HBSc / MEnvSc
- UTSC, Environmental Geoscience (Specialist Co-op), HBSc / MEnvSc
- UTSC, Environmental Physics (Specialist), HBSc / MEnvSc
- UTSC, Environmental Physics (Specialist Co-op), HBSc / MEnvSc
- UTSC, Global Environmental Change (Specialist), HBSc / MEnvSc
- UTSC, Global Environmental Change (Specialist Co-op), HBSc / MEnvSc
- UTSC, Integrative Biology (Specialist), HBSc / MEnvSc

Collaborative Specializations

The following collaborative specializations are available to students in the participating degree programs as listed below:

- **Development Policy and Power**
  - Environmental Science, MEnvSc
- **Environmental Studies**
  - Environmental Science, MEnvSc, PhD
- **Environment and Health**
  - Environmental Science, MEnvSc, PhD
- **Food Studies**
  - Environmental Science, PhD

Overview

The Graduate Department of Physical and Environmental Sciences offers opportunities for graduate studies in environmental science, leading to the degrees of **Master of Environmental Science** (MEnvSc), **Master of Science** (MSc) **in Environmental Science**, and **Doctor of Philosophy** (PhD) **in Environmental Science**.

Contact and Address

Web: www.utsc.utoronto.ca/physsci
MEnvSc email: dpes-menvsc-program.utsc@utoronto.ca
MSc email: dpes-graduate.utsc@utoronto.ca
PhD email: dpes-phd-program.utsc@utoronto.ca

MEnvSc telephone: (416) 287-7205
MSc and PhD telephone: (416) 208-2910
Fax: (416) 287-7204

Graduate Department of Physical and Environmental Sciences
University of Toronto Scarborough, 1265 Military Trail
Toronto, Ontario M1C 1A4 Canada

Physical and Environmental Sciences: Graduate Faculty

Full Members

Abbatt, Jonathan - BSc, PhD
Allen, Grant - BASc, MASc, PhD
Andrade, Maydianne - BSc, MS, PhD
Archontitsis, George - BSc, MSc, PhD ***(Chair and Graduate Chair)***
Bell, Terrence - BSc, MSc, PhD
Bender, Daniel Eric - BA, PhD
Bergquist, Bridget - BS, PhD
Boonstra, Rudy - BSc, PhD
Cadotte, Marc - BS, MS, PhD
Chen, Jing - BSc, PhD
Cowling, Sharon - BSc, MSc, PhD
Creed, Irena - BSc, MSc, PhD
Desloges, Joseph - BES, MSc, PhD

Diamond, Miriam - MSc, MSc, PhD
Dittrich, Maria - BES, MSc, PhD
Donaldson, D. James - PhD
Edwards, Elizabeth - BEng, PhD
Evans, Greg - PhD
Eyles, Nicholas - BSc, MSc, PhD, DSc
Farnood, Ramin - BASc, MASc, PhD
Finkelstein, Sarah - AB, MPH, PhD
Gough, William - BSc, MSc, PhD ***(Vice-Principal, Academic and Dean)***
Hamilton, Ian G. - BE, ME, PhD
He, Yuhong - PhD
Heron, Philip Joseph - BSc, MSc, PhD
Hoffmann, Matthew - BSc, PhD
Howard, Ken - BSc, MSc, PhD
Isaac, Marney Elizabeth - BS, MES, PhD
Izmaylov, Artur - PhD
Jackson, Donald - BSc, MSc, PhD
Kerman, Kagan - BScPhm, MSc, ScD
Klenk, Nicole - BS, MSc, PhD
Kraatz, Heinz-Bernhard - BA, MC, PhD
Kronzucker, Herbert - PhD
Lehnherr, Igor - BSc, PhD
Leos Barajas, Vianey - BSc, PhD
Lovejoy, Nathan Richard - BSc, MS, PhD
Lowman, Julian - BSc, MS, DPhil
MacIvor, Scott - BSc, MSc, PhD
Malcolm, Jay - BSc, MSc, PhD
Mandrak, Nicholas - BSc, MSc, PhD
Martin, Adam - BA, MF, PhD
Mason, Andrew - MS, PhD
McMeans, Bailey - BSc, MSc, PhD
Miall, Andrew - BSc, PhD
Mitchell, Carl - PhD ***(Graduate Associate Chair)***
Molnar, Peter Kalman - BS, MMath, PhD
Murphy, Jennifer - BCh, DChem
Peng, Hui - PhD
Rochman, Chelsea - BS, PhD
Sherwood Lollar, Barbara - PhD
Short, Steven - BSc, PhD
Siegel, Jeffrey Alexander - BS, MS, PhD
Simpson, Andre - BSc, PhD
Simpson, Myrna - BS, DPhil
Smith, Sandy - BAgrSc, MSc, PhD
Spence, Nicholas David - BA, PhD
Strong, Kimberly - BSc, DPhil, FRSC
Terebiznik, Mauricio - BSc, PhD
Tozer, Laura Molly - BSc, MA, PhD
Tsuji, Leonard - BSc, DDS, PhD
Vanlerberghe, Greg - BSc, MSc, PhD
Wania, Frank - MPH, PhD
Wells, Mathew - BS, DPhil
Wilson, Kathleen - AB, AM, PhD
Wiseman, Clare - BES, MSc, ScD
Wortmann, Ulrich - BSc, MSc, PhD
Wunch, Debra - BSc, MSc, PhD
Zhang, Xiaoan - MS, PhD

Members Emeriti

Fulthorpe, Roberta - BSc, MSc, PhD

Associate Members

Alexander, Steven M. - BSc, MSc, PhD
Arnot, Jon - BS, MES, PhD
Bailey, Sarah - BSc, PhD
Brook, Jeffrey - BS, MS, PhD
Butler, Kenneth - BS, MS, PhD
Chapman, Lauren - BSc, MSc, PhD
Currie, Warren - BA, BSc, PhD
Dalili, Shadi - MSc, PhD
Daxberger, Heidi - PhD
Depew, David - BSc, MSc, PhD
Drake, Andrew - BSc, PhD
Dunlop, Erin - BSc, PhD
Emilson, Erik - BSc, MSc, PhD
Hadzovic, Alen - BSc, PhD
Hahs, Amy - BSc, PhD
Hung, Hayley - BChe, MS, PhD
Jobst, Karl - BSc, PhD
Johnson, Cheryl Ann - BASc, MASc, PhD
Johnson, Timothy - BSc, MSc, PhD
Koops, Marten - BSc, MSc, PhD
Livingstone, Stuart - BS, PhD
Mackereth, Rob - BSc, MSc, PhD
MacLellan, James - BA, MS, DPhil
Meriano, Mandana - ScD
Mikhaylichenko, Svetlana - MSc, DChem
Mirza, Monirul - BSE, MEng, PhD
Mohsin, Tanzina - PhD
Muir, Derek - BSc, MSc, PhD
Reichman, Suzie - BES, PhD
Ross, Cody - BES, BSc, MSc, PhD
Roy, Dimple - BA, MA
Saber Sichani, Ali - BE, MES, PhD
Sauer, Effiette - BS, PhD
Smith, Karen Louise - BSc, MASc, MASc, PhD
Steffen, Alexandra - BSc, MSc
Vazquez Perales, Ricardo - BPHE, MSc, PhD
Weaver, Dan - BSc, MS, PhD
Zhu, Jiping - BS, MSc, DSc
Zuk, Aleksandra - BM, BNSc, MA, MA, PhD

Physical and Environmental Sciences: Environmental Science MEnvSc

The **Master of Environmental Science (MEnvSc)** is a 12-month degree program committed to the development of well-trained practitioners in environmental science in all fields, primarily to meet the needs of industry, governments, and environmental policy/education organizations.

The MEnvSc offers three enrolment options — research, internship, and part-time studies — in each of the three fields. The three designated fields of study are:

- **Climate Change Impacts and Adaptation**: Students are trained in the science, data analysis, and rigorous assessment process for the impacts of climate change on a wide range of natural and human systems.
- **Conservation and Biodiversity**: A major focus is the application of ecological theory and principles to real-world conservation challenges.
- **Terrestrial and Aquatic Systems**: A major focus is understanding the flux of contaminants and excess nutrients through surface and sub-surface environments and the methods/solutions needed to remediate contaminated or damaged environmental systems.

In all three fields, students can opt for an internship or a research option after eight months of coursework. The Department of Physical and Environmental Sciences has the support of two dedicated internship coordinators who help students find and successfully complete an internship by providing them with professional skills training and in-class workshops on topics that include job search preparation and skills such as: environmental labour market, workplace expectations, professionalism, networking, and more. The MEnvSc program works closely with a broad employer base for internship opportunities. Research-stream MEnvSc students receive intensive and individualized academic and research support from mentors of their choice.

Full-time and part-time study options are available in all fields of study.

Physical and Environmental Sciences: Environmental Science MEnvSc; Field: Climate Change Impacts and Adaptation

MEnvSc Program; Field: Climate Change Impacts and Adaptation

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Physical and Environmental Sciences' additional admission requirements stated below.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- A minimum mid-B grade average in the last two years of the undergraduate program.
- Applicants must submit a written statement explaining their objectives for entering the program and the suitability of their background. Appropriate post-graduate work experiences will be considered as part of the admission application.
- A science or engineering undergraduate degree including at least two half courses or one full course in each of chemistry, physics, calculus, and biology.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **5.5 full-course equivalents (FCEs)** as follows:
  - EES1100H *Advanced Seminar in Environmental Science*
  - EES1117H *Climate Change Impact Assessment*
  - EES1132H *Climate Data Analysis*
    - Note: students who have completed EESD21H3 as part of their undergraduate degree, and achieved a minimum grade of 70%, should replace EES1132H with another elective graduate course of the same credit weight (0.5 FCE).
  - EES1133H *Climate Change Science and Modelling*
  - Completion of two of the following three courses:
    - EES1131H *Applied Climatology*
      - Note: students who have completed EESD31H3 as part of their undergraduate degree, and achieved a minimum grade of 70%, cannot complete EES1131H as part of the MEnvSc program; they should complete EES1134H and EES1136H.
    - EES1134H *Climate Change Policy*
    - EES1136H *Climate Change Adaptation*
  - Completion of either:
    - 0.5 FCE in elective courses (see course list) and 2.0 FCEs for the internship (EES1116Y), **or**
    - 1.0 FCE in elective courses (see course list) and 1.5 FCEs for the research paper (EES1101Y). Students planning to complete the research paper option must complete the prerequisite (EES1114H).
- Students will choose either a research or internship option.
  - **Research option:** Each student is required to have a research supervisor. For full-time students, the intensive research necessary for the research paper will normally be completed in the final Summer session. The final research paper needs to be written in scientific journal format and will be presented and defended orally in front of an examination committee. The committee will include the supervisor and two other members of the graduate faculty.
  - **Internship option:** For full-time students, the internship in private industry, government, or a non-governmental organization (NGO) will normally be completed in the final Summer session. It will consist of a minimum of four consecutive months. Successful completion of the internship is based on an assessment completed by the student's work supervisor, the satisfactory completion of a written experience report, and the satisfactory completion and presentation of a poster highlighting the internship experience.
- A final grade below 70% in any course equates to an FZ, which is an insufficient grade. A MEnvSc student who receives more than one final grade of FZ (i.e., two or more) will be recommended for termination of registration from the MEnvSc program.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Physical and Environmental Sciences: Environmental Science MEnvSc; Field: Conservation and Biodiversity

MEnvSc Program; Field: Conservation and Biodiversity

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Physical and Environmental Sciences' additional admission requirements stated below.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- A minimum mid-B grade average in the last two years of the undergraduate program.
- Applicants must submit a written statement explaining their objectives for entering the program and the suitability of their background. Appropriate post-graduate work experiences will be considered as part of the admission application.
- An undergraduate degree in biology or a closely related field, and successful completion of an undergraduate course in conservation biology. Students who have not successfully completed an undergraduate course in conservation biology will be required to complete an undergraduate course, BIOC63H3 *Conservation Biology* (0.5 FCE), as an extra (EXT) course.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **5.5 full-course equivalents (FCEs)** as follows:
  - EES1100H *Advanced Seminar in Environmental Science*
  - EES3000H *Applied Conservation Biology*
  - EES3001H *Professional Scientific Literacy*
  - EES3002H *Conservation Policy*
  - EES3003H *Topics in Applied Biodiversity*
  - Completion of either:
    - 1.0 FCE in elective courses (see the course list) and 2.0 FCEs for the internship (EES1116Y) **or**
    - 1.5 FCEs in elective courses (see the course list) and 1.5 FCEs for the research paper (EES1101Y).
- Students will choose either a research or internship option.
  - **Research option:** Each student is required to have a research supervisor. For full-time students, the intensive research necessary for the research paper will normally be completed in the final Summer session. The final research paper needs to be written in scientific journal format and will be presented and defended orally in front of an examination committee. The committee will include the supervisor and two other members of the graduate faculty.
  - **Internship option:** For full-time students, the internship in private industry, government, or a non-governmental organization (NGO) will normally be completed in the final Summer session. It will consist of a minimum of four consecutive months. Successful completion of the internship is based on an assessment completed by the student's work supervisor, the satisfactory completion of a written experience report, and the satisfactory completion and presentation of a poster highlighting the internship experience.
- A final grade below 70% in any course equates to an FZ, which is an insufficient grade. A MEnvSc student who receives more than one final grade of FZ (i.e., two or more) will be recommended for termination of registration from the MEnvSc program.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Physical and Environmental Sciences: Environmental Science MEnvSc; Field: Terrestrial and Aquatic Systems

MEnvSc Program; Field: Terrestrial and Aquatic Systems

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Physical and Environmental Sciences' additional admission requirements stated below.
- Applicants whose primary language is not English, and who graduated from a university where the language of instruction and examination was not English, must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- A minimum mid-B grade average in the last two years of the undergraduate program.
- Applicants must submit a written statement explaining their objectives for entering the program and the suitability of their background. Appropriate post-graduate work experiences will be considered as part of the admission application.
- A science or engineering undergraduate degree including at least two half courses or one full course in each of chemistry, physics, calculus, and biology.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **5.5 full-course equivalents (FCEs)** as follows:
  - EES1100H *Advanced Seminar in Environmental Science*
  - Complete either:
    - 3.0 FCEs in elective courses (see the course list) and 2.0 FCEs for the internship (EES1116Y) **or**
    - 3.5 FCEs in elective courses (see the course list) and 1.5 FCEs for the research paper (EES1101Y). Students planning to complete the research paper option must complete the prerequisite EES1114H.
- Students will choose either a research or internship option.
  - **Research option:** Each student is required to have a research supervisor. For full-time students, the intensive research necessary for the research paper will normally be completed in the final Summer session. The final research paper needs to be written in scientific journal format and will be presented and defended orally in front of an examination committee. The committee will include the supervisor and two other members of the graduate faculty.
  - **Internship option:** For full-time students, the internship in private industry, government, or a non-governmental organization (NGO) will normally be completed in the final Summer session. It will consist of a minimum of four consecutive months. Successful completion of the internship is based on an assessment completed by the student's work supervisor, the satisfactory completion of a written experience report, and the satisfactory completion and presentation of a poster highlighting the internship experience.
- A final grade below 70% in any course equates to an FZ, which is an insufficient grade. A MEnvSc student who receives more than one final grade of FZ (i.e., two or more) will be recommended for termination of registration from the MEnvSc program.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Physical and Environmental Sciences: Environmental Science MSc

The purpose of the **Master of Science (MSc) in Environmental Science** is to train Bachelor of Science or Engineering graduates in the design, execution, and dissemination of research that is focused on the interfaces between traditional disciplines in dealing with fundamentally scientific, environment-focused issues. This is a full-time, 16-month program with a unique May start date that will help students to rigorously gather data towards the completion of an MSc thesis.

The MSc in Environmental Science will allow students to address major emerging research themes in the environment and pursue projects that make use of complementary research concepts, approaches, and tools. Faculty members are cross-appointed from several graduate units including: Cell and Systems Biology; Chemical Engineering and Applied Chemistry; Chemistry; Earth Sciences; Ecology and Evolutionary Biology; Geography and Planning; Forestry; and Physics, which ensures the supervision of research projects across a broad range of expertise and research facilities. This program will engage these strengths in order to foster research that is critical for finding solutions to, or elucidating the root causes of, today's critical environmental challenges.

MSc Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Physical and Environmental Sciences' additional admission requirements stated below.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- A science or engineering undergraduate degree with a minimum mid-B grade average in the last two years of the undergraduate program.
- Applicants must submit a written, maximum 300-word statement describing their interests in Environmental Science. The statement should describe any research experience, the suitability of their academic background for an MSc in Environmental Science, and their environmental science-related research objectives in the MSc program. Applicants must make clear in their written statement the agreement of a proposed supervising professor with which they plan to conduct their thesis research and their interest in conducting research in their chosen area.
- Applicants must have completed one of the following:
  - At least one supervised research experience during their undergraduate studies. This may include an honours thesis, a research-based work term (involving lab or field work, modelling), a summer research experience, or another course formally linked to a research project. One of the applicant's reference letters must be from their research experience supervisor or co-supervisor.
  - At least 10 one-term courses at the upper levels (Years 3 and 4 of full-time undergraduate studies) in a science discipline (for example, environmental science, earth science, physical geography, biology, chemistry, mathematics/statistics, physics, computer science, forestry) or in a branch of engineering (for example, civil, chemical, environmental).

Completion Requirements

- **Coursework.** Students must successfully complete a minimum of **1.5 full-course equivalents (FCEs)** as follows:
  - EES1200H *Environmental Science Research Experience*.

    - EES1201H *Environmental Science: Approaches and Methods in Research*.
    - A minimum of 0.5 elective FCE to provide background for the student's research. Courses selected must be approved by the student's supervisor and the Graduate Chair. In some cases, additional courses may be required if a student's preparedness is assessed as being insufficient. Students may apply to take a number of graduate-level courses taught by the core faculty, both within and outside the Graduate Department of Physical and Environmental Sciences, as part of their 0.5 elective FCE for the degree. However, all courses for the MSc degree must be approved by the student's supervisor and the Graduate Chair.
- **Thesis.** The execution of an original piece of research in environmental science carried out under faculty supervision and presented in thesis form. The program requires the oral examination of the completed thesis to a committee of three faculty members, including the faculty supervisor(s).

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: S-FWS)
Time Limit: 3 years full-time

Physical and Environmental Sciences: Environmental Science PhD

Research and teaching are focused on the interfaces between traditional disciplines in dealing with fundamental scientific issues. Faculty members are cross-appointed from several departments including: chemistry, earth sciences, geography, ecology and evolutionary biology, cell and systems biology, engineering, forestry, physics, and social sciences. Research is clustered into six major concentrations:

- Climate Change and the Environment
- Contaminant Flux
- Environmental Science in Transitional Economies
- Great Lakes Ecosystems
- Remediation and Restoration of Degraded Environmental Systems
- Urban Geoscience

Applicants may be accepted into the **Doctor of Philosophy (PhD) program** via one of three routes:

1) following completion of an appropriate master's degree;
2) transfer from an appropriate master's program; or
3) direct entry following completion of an appropriate BSc degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Physical and Environmental Sciences' additional admission requirements stated below.
- Applicants may be accepted into the PhD program following completion of the MEnvSc degree, an MSc degree in environmental science, or a related discipline, or the MASc degree in environmental engineering or related discipline, or equivalent from a recognized university with a minimum of B+ average in all work completed in the master's program.
- Applicants must make clear in their written statement the agreement of a proposed supervising professor with which they plan to conduct their thesis research and their interest in conducting research in their chosen area.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **1.5 full-course equivalents (FCEs)** as follows:
    - A mandatory 0.5 FCE (EES2200H *Advanced Seminar in Environmental Science*) plus 1.0 FCE to provide background for the student's research. Courses selected must be approved by the student's supervisor and the Graduate Chair. In some cases, additional courses may be required if a student's preparedness is assessed as being insufficient.
    - Students may apply to take a number of PhD-level courses taught by the core faculty within the Graduate Department of Physical and Environmental Sciences. Courses taught by faculty outside the Graduate Department of Physical and Environmental Sciences can be considered for the PhD degree as part (0.5 FCE) of their 1.0 FCE for the degree. However, all courses for the PhD degree must be approved by the student's supervisor and the Graduate Chair.
- **Thesis.** The execution of an original piece of research in environmental science carried out under faculty supervision and presented in thesis form. The program requires the development and submission of a thesis proposal, and its examination in an oral thesis proposal appraisal (before the end of Year 2), a departmental oral examination of the completed thesis, and a Doctoral Final Oral Examination (FOE) carried out under the auspices of the School of Graduate Studies (SGS) involving examination by an appropriate at-arms-length external examiner.
    - The PhD proposal appraisal consists of a 20-minute presentation given by the student on the proposed thesis work followed by a question period where the student is examined on their proposal and their mastery of concepts in environmental science. The emphasis will be on the theory and proposed approach, rather than on progress to date. A negative outcome requires that the student retake the exam within four months after incorporating recommendations from the committee for improving the thesis research proposal. The outcome of the second exam will be either a pass or withdrawal from the program.
    - The Graduate Department of Physical and Environmental Sciences' PhD program requires that all PhD candidates complete two thesis defences: a Departmental Thesis Defence and an FOE with SGS. Normally, the Departmental Thesis Defence will be held at least eight weeks prior to the FOE.

The committee will notify the Graduate Chair that the thesis is ready to be forwarded to SGS for the FOE. If the PhD candidate does not pass the Departmental Thesis Defence, the committee may recommend that the PhD candidate postpone their FOE.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- Applicants may be accepted into the PhD program by requesting transfer from a suitable master's program (see above); students may reclassify from the master's program after 12 months of full-time study. Transfer from the MEnvSc program is not permitted.
- Applicants must make clear in their written statement the agreement of a proposed supervising professor with which they plan to conduct their thesis research and their interest in conducting research in their chosen area.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **1.5 full-course equivalents (FCEs)** as follows:
  - A mandatory 0.5 FCE (EES2200H *Advanced Seminar in Environmental Science*) plus 1.0 FCE to provide background for the student's research. Courses selected must be approved by the student's supervisor and the Graduate Chair. In some cases, additional courses may be required if a student's preparedness is assessed as being insufficient.
  - Students may apply to take a number of PhD-level courses taught by the core faculty within the Graduate Department of Physical and Environmental Sciences. Courses taught by faculty outside the Graduate Department of Physical and Environmental Sciences can be considered for the PhD degree as part (0.5 FCE) of their 1.0 FCE for the degree. However, all courses for the PhD degree must be approved by the student's supervisor and the Graduate Chair.
- **Thesis.** The execution of an original piece of research in environmental science carried out under faculty supervision and presented in thesis form. The program requires the development and submission of a thesis proposal, and its examination in an oral thesis proposal appraisal (before the end of Year 2), a departmental oral examination of the completed thesis, and a Doctoral Final Oral Examination (FOE) carried out under the auspices of the School of Graduate Studies (SGS) involving examination by an appropriate at-arms-length external examiner.
  - The PhD proposal appraisal consists of a 20-minute presentation given by the student on the proposed thesis work followed by a question period where the student is examined on their proposal and their mastery of concepts in environmental science. The emphasis will be on the theory and proposed approach, rather than on progress to date. A negative outcome requires that the student retake the exam within four months after incorporating recommendations from the committee for improving the thesis research proposal. The outcome of the second exam will be either a pass or withdrawal from the program.
  - The Graduate Department of Physical and Environmental Sciences' PhD program requires that all PhD candidates complete two thesis defences: a Departmental Thesis Defence and an FOE with SGS. Normally, the Departmental Thesis Defence will be held at least eight weeks prior to the FOE. The committee will notify the Graduate Chair that the thesis is ready to be forwarded to SGS for the FOE. If the PhD candidate does not pass the Departmental Thesis Defence, the committee may recommend that the PhD candidate postpone their FOE.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Graduate Department of Physical and Environmental Sciences' additional admission requirements stated below.
- In the case of exceptional students, applicants may be accepted into the PhD program by direct entry; that is, after completing an honours BSc degree in a related discipline with a minimum University of Toronto average of A– or equivalent.
- Applicants must make clear in their written statement the agreement of a proposed supervising professor with which they plan to conduct their thesis research and their interest in conducting research in their chosen area.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **2.5 full-course equivalents (FCEs)** as follows:
  - A mandatory 0.5 FCE (EES2200H *Advanced Seminar in Environmental Science*) plus 2.0 FCEs to provide background for the student's research. Courses selected must be approved by the student's supervisor and the Graduate Chair. In some cases, additional courses may be required if a student's preparedness is assessed as being insufficient.
  - Students may apply to take a number of PhD-level courses taught by the core faculty within the Graduate Department of Physical and Environmental Sciences. Courses taught by faculty outside the Graduate Department of Physical and

Environmental Sciences can be considered as part (up to 1.0 FCE) of their 2.0 FCEs for the degree. However, all courses for the PhD degree must be approved by the student's supervisor and the Graduate Chair.

- **Thesis.** The execution of an original piece of research in environmental science carried out under faculty supervision and presented in thesis form. The program requires the development and submission of a thesis proposal, and its examination in an oral thesis proposal appraisal (before the end of Year 2), a departmental oral examination of the completed thesis, and a Doctoral Final Oral Examination (FOE) carried out under the auspices of the School of Graduate Studies (SGS) involving examination by an appropriate at-arms-length external examiner.
  - The PhD proposal appraisal consists of a 20-minute presentation given by the student on the proposed thesis work followed by a question period where the student is examined on their proposal and their mastery of concepts in environmental science. The emphasis will be on the theory and proposed approach, rather than on progress to date. A negative outcome requires that the student retake the exam within four months after incorporating recommendations from the committee for improving the thesis research proposal. The outcome of the second exam will be either a pass or withdrawal from the program.
  - The Graduate Department of Physical and Environmental Sciences' PhD program requires that all PhD candidates complete two thesis defences: a Departmental Thesis Defence and an FOE with SGS. Normally, the Departmental Thesis Defence will be held at least eight weeks prior to the FOE. The committee will notify the Graduate Chair that the thesis is ready to be forwarded to SGS for the FOE. If the PhD candidate does not pass the Departmental Thesis Defence, the committee may recommend that the PhD candidate postpone their FOE.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Physical and Environmental Sciences: Environmental Science MEnvSc Courses

Please note that not all courses are offered every year.

Course Code	Course Title
EES1100H	Advanced Seminar in Environmental Science
EES1101Y	Research Paper in Environmental Science
EES1102H	Analytical Chemistry for Geoscientists
EES1103H	Field Measurement and Sampling: The Essentials
EES1104H	Microorganisms and the Environment
EES1105H	Soil Contamination Chemistry
EES1106H	Geological Evolution and Environmental History of North America
EES1108H	Environmental Science Field Camp
EES1109H	Advanced Techniques in Geographic Information Systems
EES1111H	Freshwater Ecology and Biomonitoring
EES1112H	Contaminant Cycling in Transboundary Environments
EES1113H	Groundwater Contamination
EES1114H	Directed Readings in Environmental Science I
EES1115H	Directed Readings in Environmental Science II
EES1116Y	Internship
EES1117H	Climate Change Impact Assessment
EES1118H	Fundamentals of Ecological Modelling
EES1119H	Quantitative Environmental Analysis
EES1120H	Fluid Dynamics of Contaminant Transport
EES1121H	Modelling the Fate of Organic Chemicals in the Environment
EES1122H	Global Sustainability
EES1123H	Environmental Regulations
EES1124H	Environmental Project Management
EES1125H	Contaminated Site Remediation
EES1126H	Hydrology and Watershed Management
EES1127H	Applied Biogeochemistry and Geomicrobiology
EES1128H	Biophysical Interactions in Managed Environments
EES1129H	Brownfields Redevelopment
EES1130H	Ontario BioGeospheres Field Courses
EES1131H	Applied Climatology
EES1132H	Climate Data Analysis
EES1133H	Climate Change Science and Modelling
EES1134H	Climate Change Policy
EES1135H	Environmental Change and Human Health
EES1136H	Climate Change Adaptation
EES1137H	Quantitative Applications for Data Analysis
EES1139H	Perspectives in Environmental Health: Mechanisms of Toxicity

Course Code	Course Title
EES1701H	Environmental Legislation and Policy
EES1704H	Environmental Risk Assessment
EES3000H	Applied Conservation Biology
EES3001H	Professional Scientific Literacy
EES3002H	Conservation Policy
EES3003H	Topics in Applied Biodiversity
EES3111H	Conservation Genetics
EES3113H	Topics in Population and Community Ecology
EES3114H	Topics in Urban and Rural Ecology
EES4001H	Internship Training 1
EES4003H	Academic Training 1

Physical and Environmental Sciences: Environmental Science MSc Courses

Required Courses

Course Code	Course Title
EES1200H	Environmental Science Research Experience
EES1201H	Environmental Science: Approaches and Methods in Research

Elective Courses

Course Code	Course Title
EES1102H	Analytical Chemistry for Geoscientists
EES1104H	Microorganisms and the Environment
EES1105H	Soil Contamination Chemistry
EES1106H	Geological Evolution and Environmental History of North America
EES1108H	Environmental Science Field Camp
EES1109H	Advanced Techniques in Geographic Information Systems
EES1111H	Freshwater Ecology and Biomonitoring
EES1112H	Contaminant Cycling in Transboundary Environments
EES1113H	Groundwater Contamination
EES1114H	Directed Readings in Environmental Science I
EES1117H	Climate Change Impact Assessment
EES1118H	Fundamentals of Ecological Modelling
EES1119H	Quantitative Environmental Analysis
EES1120H	Fluid Dynamics of Contaminant Transport
EES1121H	Modelling the Fate of Organic Chemicals in the Environment
EES1126H	Hydrology and Watershed Management
EES1127H	Applied Biogeochemistry and Geomicrobiology
EES1128H	Biophysical Interactions in Managed Environments
EES1130H	Ontario BioGeospheres Field Course
EES1131H	Applied Climatology
EES1132H	Climate Data Analysis
EES1133H	Climate Change Science and Modelling
EES1134H	Climate Change Policy
EES1135H	Environmental Change and Human Health
EES1136H	Climate Change Adaptation
EES1137H	Quantitative Applications for Data Analysis
EES3000H	Applied Conservation Biology
EES3001H	Professional Scientific Literacy
EES3002H	Conservation Policy
EES3003H	Topics in Applied Biodiversity
EES3113H	Topics in Population and Community Ecology
EES3114H	Topics in Urban and Rural Ecology

Physical and Environmental Sciences: Environmental Science PhD Courses

Core Course

Course Code	Course Title
EES2200H	Advanced Seminar in Environmental Science

The following are courses offered within the Department of Physical and Environmental Sciences. With the approval of the Graduate Chair, relevant courses from other graduate departments can be applied to the required full-course equivalents. Not all courses are offered every year.

Elective Courses

Course Code	Course Title
EES1102H	Analytical Chemistry for Geoscientists
EES1103H	Field Measurements and Sampling: The Essentials
EES1104H	Microorganisms and the Environment
EES1105H	Soil Contamination Chemistry
EES1106H	Geological Evolution and Environmental History of North America
EES1109H	Advanced Techniques in Geographic Information Systems
EES1111H	Freshwater Ecology and Biomonitoring
EES1112H	Contaminant Cycling in Transboundary Environments
EES1113H	Groundwater Contamination
EES1117H	Climate Change Impact Assessment
EES1118H	Fundamentals of Ecological Modelling
EES1119H	Quantitative Environmental Analysis
EES1120H	Fluid Dynamics of Contaminant Transport
EES1121H	Modeling the Fate of Organic Chemicals in the Environment
EES1122H	Global Sustainability
EES1126H	Hydrology and Watershed Management
EES1127H	Applied Biogeochemistry and Geomicrobiology
EES1128H	Biophysical Interactions in Managed Environments
EES1131H	Applied Climatology
EES1132H	Climate Data Analysis
EES1133H	Climate Change Science and Modelling
EES1134H	Climate Change Policy
EES1135H	Environmental Change and Human Health
EES1136H	Climate Change Adaptation
EES1137H	Quantitative Applications for Data Analysis
EES1139H	Perspectives in Environmental Health: Mechanisms of Toxicity
EES2201H	Advanced Readings in Environmental Science
EES3000H	Applied Conservation Biology
EES3001H	Professional Scientific Literacy
EES3002H	Conservation Policy
EES3003H	Topics in Applied Biodiversity
EES3111H	Conservation Genetics
EES3113H	Topics in Population and Community Ecology
EES3114H	Topics in Urban and Rural Ecology

Physical Therapy

Physical Therapy: Introduction

Faculty Affiliation

Medicine

Degree Programs

Physical Therapy

MScPT

Overview

The Department of Physical Therapy is committed to educating future and current physical therapists, advancing practice, fostering leadership, and contributing to our communities. Graduates from the Master of Science in Physical Therapy (MScPT) program are improving the health of individuals through the discovery, application, and exchange of knowledge.

Contact and Address

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Physical Therapy: Graduate Faculty

Full Members

Agur, Anne - BSc, MSc, PhD
Brooks, Dina - BSc(PT), MSc, PhD
Gibson, Barbara - MSc, BMR(PT), PhD
Jaglal, Susan - BSc, MSc, PhD ***(Chair and Graduate Chair)***
Mathur, Sunita - BSc(PT), MSc(PT), PhD
Nixon, Stephanie - BHSc(PT), BA, MSc, PhD
O'Brien, Kelly - BS, BSc(PT), PhD
Patterson, Kara - BPT, BSc, MSc, PhD
Reid, Darlene - BMR(PT), PhD
Salbach, Nancy - BSc(PT), BS, MSc, PhD
Zabjek, Karl - BSc, MClSc, PhD

Members Emeriti

Yoshida, Karen - BSc, BPHE, MSc, PhD

Associate Members

Gabison, Sharon - BSc, BSc(PT), MSc
Mori, Brenda - BSc(PT), MSc, PhD
Niles, Chavon - BE, BS, AM, PhD
Shaw, Jay - BHK, MSc(PT), PhD
Switzer-Mcintyre, Sharon - BSc, BPHE, MEd, PhD
Wickerson, Lisa - BSc(PT), BSc(PT), MSc, PhD
Yeung, Euson - BSc(PT), MEd, PhD

Physical Therapy: Physical Therapy MScPT

24-Month Option

The **Master of Science in Physical Therapy (MScPT)** is a 24-month professional program leading to entry to practice. The program is accredited by Physiotherapy Education Accreditation Canada (PEAC) and more information about accreditation is available on the Department of Physical Therapy's website. Graduates will be eligible to write the Physiotherapy Competency Examination (PCE), administered by the Canadian Alliance of Physiotherapy Regulators, which qualifies them to practise physical therapy in Canada. Graduates will be eligible to register in the Canadian Physiotherapy Association and the Colleges of Physiotherapy in all Canadian provinces.

12-Month Option

Admissions to the 12-month advanced-standing option have been administratively suspended.

The Master of Science in Physical Therapy, Advanced-Standing Option allows eligible physical therapists with a bachelor's degree in physiotherapy to acquire the master's degree in an online environment with on-campus residency. There is a strong focus on research and best practices integrated throughout the program.

MScPT Program (24-Month Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Physical Therapy's additional admission requirements stated below.
- Applicants are considered if they hold an appropriate bachelor's degree with high academic standing from a recognized university, with a minimum mid-B average in the final year.

- Prerequisite courses include human vertebrate physiology (0.5 full-course equivalent [FCE]); human anatomy (0.5 FCE); life and/or physical sciences (1.0 FCE); social sciences, and/or humanities, and/or languages (1.0 FCE); and statistics or research methods (0.5 FCE). A minimum grade of B– (or 70%) in each of these courses, as per the grade recorded on the transcript, is required.
- Proficiency in the English language must be demonstrated by all applicants educated outside Canada whose primary language is not English and who graduated from a university where the language of instruction and examination was not English. The department prefers the Test of English as a Foreign Language (TOEFL):
  - Paper-based test: a minimum score of 600, with 5 on the Test of Written English (TWE) and 50 on the Test of Spoken English (TSE)
  - Internet-based test: a minimum score of 100/120 overall, and 22/30 on the writing and speaking sections.
  - TOEFL candidates must request that results be sent to institution code 0982.
  - Results are due by March 1 of the application year.
- Complete a mandatory, computer-based situational judgment test (CASPer) to assist with the selection process. CASPer assesses for non-cognitive skills and interpersonal characteristics that are important for successful students and graduates of the program. Please refer to the Physical Therapy website for details on how the results are used in the admission process.
- Applicants can apply online using the Ontario Rehabilitation Sciences Programs Application Service (ORPAS). Visit the Physical Therapy and the ORPAS websites for more information regarding application requirements and document submissions including the CASPer test, Computer Administered Profile, confidential assessment forms, reference letters, prerequisites, etc.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **18.75 full-course equivalents (FCEs)** over two years of continuous, full-time study:
  - PHT1101H *Critical Foundations of Physical Therapy*
  - PHT1102Y *Physical Therapy Practice I*
  - PHT1103Y *Physical Therapy Practice II*
  - PHT1104Y *Physical Therapy Practice III*
  - PHT1105Y *Clinical Internship I*
  - PHT1106H *Advanced Critical Thinking in Physical Therapy*
  - PHT1107H *Scholarly Practice I*
  - PHT1108Y *Clinical Internship II*
  - PHT1109Y *Clinical Internship III*
  - PHT1110Y *Physical Therapy Practice IV*
  - PHT1111H *Selected Topics in Physical Therapy*
  - PHT1112Y *Clinical Internship IV*
  - PHT1113Y *Scholarly Practice II*
  - PHT1114Y *Clinical Internship V*.
- Included within the program structure are 30 weeks of full-time clinical internships.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

MScPT Program (12-Month Advanced-Standing Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Physical Therapy's additional admission requirements stated below.
- Applicants who are eligible physical therapists will be considered if they have completed an appropriate bachelor's degree in physiotherapy with a minimum mid-B average in the final year.
- Applicants must have successfully completed the national Canadian Physiotherapy Competency Examination (with the exception of individuals licensed to practise in Quebec) and be licensed for independent practice in Canada with a provincial regulating body.
- Proficiency in the English language must be demonstrated by all applicants educated outside Canada whose primary language is not English and who graduated from a university where the language of instruction and examination was not English. The department prefers the Test of English as a Foreign Language (TOEFL):
  - Paper-based test: a minimum score of 600, with 5 on the Test of Written English (TWE) and 50 on the Test of Spoken English (TSE)
  - Internet-based test: a minimum score of 100/120 overall, and 22/30 on the writing and speaking sections.
- Applicants apply using the SGS Online Admissions Application system. Visit the Physical Therapy website for more information on application requirements and document submissions.

Completion Requirements

- Students must complete this program option in an online environment with mandatory on-campus residency requirements.
- Students must attend unit 6 PHT1006Y (0.75 FCE) and unit 12 PHT1012Y (1.0 FCE) in on-campus residency periods.
- Students must complete unit 10 PHT1010Y, a group research project, via online format (0.75 FCE).
- Students must complete PHT1016H *Evidence Based Practice in Physical Therapy* (0.5 FCE).
- Complete an elective course (0.5 FCE) either online or on campus.
- For information on units of instruction, please visit the Physical Therapy website.
- Students must complete the program option in an online environment. In addition, there are two mandatory on-campus residencies, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.

Mode of Delivery: Hybrid
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

Physical Therapy: Physical Therapy MScPT Courses

Required Courses

Course Code	Course Title
PHT1101H	Critical Foundations of Physical Therapy
PHT1102Y	Physical Therapy Practice I
PHT1103Y	Physical Therapy Practice II
PHT1104Y	Physical Therapy Practice III
PHT1105Y	Clinical Internship I
PHT1106H	Advanced Critical Thinking in Physical Therapy
PHT1107H	Scholarly Practice I
PHT1108Y	Clinical Internship II
PHT1109Y	Clinical Internship III
PHT1110Y	Physical Therapy Practice IV
PHT1111H	Selected Topics in Physical Therapy
PHT1112Y	Clinical Internship IV
PHT1113Y	Scholarly Practice II
PHT1114Y	Clinical Internship V

Physics

Physics: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Physics

MSc

- Dual Degree Programs:
  - Master of Science in Physics (University of Toronto) / Master in Physics (Sapienza Università di Roma) / Master in Physics (Université Paris-Saclay);
  - Master of Science in Physics (University of Toronto) / Master in Physics (Sapienza Università di Roma) / Master in Physics (Universidade do Porto)

PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Biomedical Engineering** (admissions have been administratively suspended)
  - Physics, MSc, PhD
- **Environmental Studies**
  - Physics, MSc, PhD

Overview

The Department of Physics carries out research in experimental and theoretical physics in the following fields: atomic and molecular physics; biological physics; earth, atmospheric, and planetary physics; quantum optics and quantum information; quantum condensed matter physics; and subatomic physics and astrophysics. The department is involved in many collaborative efforts and has close ties to institutes worldwide.

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Physics: Graduate Faculty

Full Members

Abbatt, Jonathan - BSc, PhD
Barzda, Virginijus - BS, DSc
Bond, J. Richard - BSc, MS, PhD, FRS, FRSC
Braverman, Boris - BS, PhD
Curtin, David - BSc, MSc, PhD
de la Barrera, Sergio - BS, MS, PhD
Dhirani, Al-Amin - MSc, PhD
Diamond, Miriam - BSc, MSc, PhD
Essick, Reed - BSc, PhD
Fishbach, Maya - PhD
Goyal, Sidhartha - BTech, MS, PhD
Gradinaru, Claudiu - PhD
Grisouard, Nicolas - BSc, MSc, PhD
Hong, Ziqing - BS, MS, PhD
Ilic, Nikolina - BSc, PhD
James, Daniel - BA, PhD
John, Sajeev - SB, PhD, FRSC
Jones, Dylan - BA, SM, PhD
Julian, Stephen - BSc, MSc, PhD
Kee, Hae-Young - BS, MS, PhD
Kim, Yong Baek - BSc, MSc, PhD, FRSC
Kim, Young-June - BS, PhD ***(Associate Chair, Graduate Studies)***
Krieger, Peter - BSc, MSc, PhD
Kushner, Paul - BSc, MSc, PhD ***(Chair and Graduate Chair)***
Lee, Christopher - BA, MSc, DPhil
Li, Xiang - BS, PhD
Liu, Qinya - BSc, PhD
Lo, Hoi-Kwong - BA, MA, MS, PhD
Lowman, Julian - BSc, MS, DPhil
Luke, Michael - BSc, AM, PhD
Marjoribanks, Robin - BSc, MS, MSc, PhD
McMillen, David - BSc, MS, PhD
Menou, Kristen - BSc, MS, ScD
Miller, R.J. Dwayne - BSc, PhD
Milstein, Josh - BS, PhD
Moore, G.W.K. - BSc, PhD
Murray, Norman - BSc, PhD, CRC
Netterfield, C. Barth - BSc, PhD
O'Neill, Morgan - BS, PhD
Orr, Robert - BSc, PhD, ARCS
Paramekanti, Arun - BTech, PhD
Peet, A.W. - BSc, PhD
Peltier, W. Richard - BSc, MSc, PhD, FRSC
Pen, Ue-Li - BSc, PhD
Poppitz, Erich - MA, MSc, PhD
Pysklywec, Russell - BSc, MSc, PhD
Rein, Hanno - MS, DPhil
Ripperda, Bart - BSE, MSc, PhD
Ryu, William - AB, PhD
Savard, Pierre - BSc, MSc, PhD
Scaffidi, Thomas - BSc, BE, MSc, PhD
Segal, Dvira - BSc, DSc
Sinervo, Pekka - BSc, PhD, FRSC
Sipe, John - BSc, MSc, PhD, FRSC
Steinberg, Aephraim - BS, MA, PhD, FRSC

Strong, Kimberly - BSc, DPhil, FRSC
Su, Zhan - BS, PhD
Swidinsky, Andrei - BSc, MSc, PhD
Teuscher, Richard - BSc, MSc, PhD
Thompson, Christopher - BSc, PhD
Thywissen, Joseph - BS, MA, PhD
Trischuk, William - BSc, PhD
Valencia, Diana - BS, MS, ScD
Vanderlinde, Keith - PhD
von Lilienfeld Toal, Anatole - PhD
Vutha, Amar C. - MSc, PhD
Walker, Kaley - BSc, PhD
Wei, John - BA, MS, PhD
Wells, Mathew - BS, DPhil
Wiebe, Nathan - PhD
Wunch, Debra - BSc, MSc, PhD

Members Emeriti

Bailey, David - BSc, PhD
Holdom, Bob - BSc, MA, PhD
Milkereit, Bernd - DrRerNat
Morris, Stephen - BSc, MSc, PhD
West, Gordon - BASc, MA, PhD

Associate Members

Mariani, Zen - BSc, MSc, PhD
Rayner, Peter - BSc, PhD
Rosenblum, Erica - MSc, PhD

Physics: Physics MSc

The **Master of Science (MSc) program** is directed primarily to qualified students seeking a career in scientific research, with an emphasis on doctoral-stream studies. The MSc can be taken both with or without a thesis, the latter being the norm.

MSc Program (Coursework Plus MSc Research Report)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Physics' additional admission requirements stated below.
- An appropriate bachelor's degree with a final-year average equivalent to at least a University of Toronto mid-B.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

- Students normally complete the program requirements as follows:
  - graduate lecture courses (3.0 full-course equivalents [FCEs]);
  - a Research Report, which consists of a 6000-series research course appropriate to the field of physics (1.0 FCE) and PHY3400Y (1.0 FCE).
- MSc students are expected to attend the weekly general colloquium conducted by the department.
- The residence requirement is one year, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

MSc Program (Coursework Plus MSc Research Project)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Physics' additional admission requirements stated below.
- An appropriate bachelor's degree with a final-year average equivalent to at least a University of Toronto mid-B.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

- Students normally complete the program requirements as follows:
  - graduate lecture courses (2.0 FCEs);
  - a 6000-series research course appropriate to the field of physics (1.0 FCE);
  - a Research Project, which consists of a 7000-series seminar course appropriate to the field of physics (1.0 FCE) and PHY3400Y (1.0 FCE).
- MSc students are expected to attend the weekly general colloquium conducted by the department.
- The residence requirement is one year, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

Physics: Physics MSc (Dual Degree: MSc / Master in Physics (Sapienza Università di Roma; Université Paris-Saclay))

Dual Degree Program: Master of Science in Physics (University of Toronto) / Master in Physics (Sapienza Università di Roma) / Master in Physics (Université Paris-Saclay)

The University of Toronto MSc in Physics participates in the Erasmus Mundus Joint Master (EMJM) program of the QUAntum Research Master Education Network (QUARMEN). This dual degree program provides a pathway for students to complete degrees at the Université Paris-Saclay (France) and Università degli Studi di Roma "La Sapienza" (Italy). At the University of Toronto, students complete the Master of Science (MSc) in Physics' Option 2: Coursework plus MSc Research Project. Students are not eligible to take the other options.

In the Fall session of Year 1, students register in the Laurea Magistrale in Fisica at Sapienza Università di Roma. In the Winter and Summer sessions of Year 1, students register in the Master de physique at Université Paris-Saclay. In Year 2, students attend all three sessions (Fall, Winter, Summer) at the University of Toronto and complete Option 2 of the MSc in Physics.

Upon successful completion of the degree program, students who participate in EMJM and attend the University of Toronto as part of their participation in QUARMEN will receive three parchments, including the MSc in Physics degree from the University of Toronto.

Contact

Master of Science in Physics Program
Department of Physics, University of Toronto
Email: grad@physics.utoronto.ca

Master of Physics (Le Master de physique) Program
Université Paris-Saclay
Email: master.quarmen@universite-paris-saclay.fr

Application Process

- Applicants must apply through the QUARMEN admissions website. Applicants are then jointly selected and admitted by a Selection Board composed of at least one appointed faculty member from each partner institution.
- All applicants who are admitted to the dual degree program must then also complete the application on U of T's School of Graduate Studies online admissions application system.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the regular admission requirements of the MSc in Physics and the overall admission requirements of QUARMEN.

Program Length

6 sessions full-time (typical registration sequence: F/W/S/F/W/S)

Physics: Physics MSc (Dual Degree: MSc / Master in Physics (Sapienza Università di Roma; Universidade do Porto))

Dual Degree Program: Master of Science in Physics (University of Toronto) / Master in Physics (Sapienza Università di Roma) / Master in Physics (Universidade do Porto)

The University of Toronto MSc in Physics participates in the Erasmus Mundus Joint Master (EMJM) program of the QUAntum Research Master Education Network (QUARMEN). This dual degree program provides a pathway for students to complete degrees at Universidade do Porto (Portugal) and Università degli Studi di Roma "La Sapienza" (Italy). At the University of Toronto, students complete the Master of Science (MSc) in Physics' Option 2: Coursework plus MSc Research Project. Students are not eligible to take the other options.

In the Fall session of Year 1, students register in the Laurea Magistrale in Fisica (Master's Degree in Physics) at Sapienza Università di Roma. In the Winter and Summer sessions of Year 1, students register in the Mestrado em Física (Master in Physics) at Universidade do Porto (Portugal). In Year 2, students attend all three sessions (Fall, Winter, Summer) at the University of Toronto and complete Option 2 of the MSc in Physics.

Upon successful completion of the degree program, students who participate in EMJM and attend the University of Toronto as part of their participation in QUARMEN will receive three parchments, including the MSc in Physics degree from the University of Toronto.

Contact

Master of Science in Physics Program
Department of Physics, University of Toronto
Email: grad@physics.utoronto.ca

Master of Physics (Le Master de physique) Program
Université Paris-Saclay
Email: master.quarmen@universite-paris-saclay.fr

Application Process

- Applicants must apply through the QUARMEN admissions website. Applicants are then jointly selected and admitted by a Selection Board composed of at least one appointed faculty member from each partner institution.
- All applicants who are admitted to the dual degree program must then also complete the application on U of T's School of Graduate Studies online admissions application system.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the regular admission requirements of the MSc in Physics and the overall admission requirements of QUARMEN.

Program Length

6 sessions full-time (typical registration sequence: F/W/S/F/W/S)

Physics: Physics PhD

The Department of Physics offers excellent quality and breadth of research fields. Its internationally leading research teams, in both theory and experiment, operate across a broad spectrum of topics as well as collaborative specializations in interdisciplinary subjects. Graduates work in government, industry, and education around the world.

Applicants may enter the PhD program via one of two routes: 1) following completion of an appropriate master's degree; 2) direct entry after completing a bachelor's degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Physics' additional admission requirements stated below.
- An appropriate University of Toronto master's degree with an average of at least B+ or demonstrated comparable research competence.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

- The core of the PhD program is an original investigation, the results of which are embodied in a thesis. Lecture courses constitute a subsidiary but important part of the program. Consult the department for details.
- Complete **3.0 full-course equivalents (FCEs)**: graduate lecture **courses and a thesis**. Course credit will normally be given towards the PhD for all graduate lecture courses taken during a master's program in this department. Students who have completed an appropriate MSc elsewhere and are entering the PhD program will generally be given a course credit of up to 2.0 FCEs in graduate lecture courses towards their PhD course requirement.
- Complete a **qualifying oral examination**. Students must complete the qualifying examination within eight months. Students who fail at the first attempt have the opportunity to take the examination again within a time period specified by the examination committee.
- Students are expected to attend the weekly general colloquium conducted by the department.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Physics' additional admission requirements stated below.
- Outstanding applicants may be considered directly from undergraduate programs. Normally, these applicants will have an undergraduate average of A or higher.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

- The core of the PhD program is an original investigation, the results of which are embodied in a thesis. Lecture courses constitute a subsidiary but important part of the program. Consult the department for details.
- Complete **3.0 full-course equivalents (FCEs)**: graduate lecture **courses and a thesis**.
- Students must complete a **qualifying oral examination** within 20 months. Students who fail at the first attempt have the opportunity to take the examination again within a time period specified by the examination committee.
- Students are expected to attend the weekly general colloquium conducted by the department.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Physics: Physics MSc, PhD Courses

All courses are not given every year. Please check the departmental brochure or website for course availability.

Introductory Courses

Course Code	Course Title
PHY1460H	Nonlinear Physics
PHY1483H	Relativity Theory I
PHY1484H	Relativity Theory II
PHY1485H	Laser Physics
PHY1487H	Quantum Theory of Solids I
PHY1489H	Introduction to High Energy Physics
PHY1491H	Current Interpretations of Quantum Mechanics
PHY1493H	Seismology
PHY1498H	Introduction to Atmospheric Physics

General Courses

Course Code	Course Title
PHY1500H	Statistical Mechanics
PHY1510H	Electromagnetism
PHY1520H	Quantum Mechanics
PHY1530H	Fluid Mechanics
PHY1540H	Mathematical Methods in Physics

Professional Development

Course Code	Course Title
PHY1600H	Effective Communication for Physicists
PHY1610H	Scientific Computing for Physicists

Specialized Courses

Course Code	Course Title
PHY2108H	Special Topics in Physics
PHY2109H	Special Topics in Physics
PHY2202H	Atomic and Molecular Physics
PHY2203H	Quantum Optics I
PHY2204H	Quantum Optics II
PHY2205H	Special Topics in Quantum Optics
PHY2206H	Special Topics in Quantum Optics
PHY2208H	Nonlinear Optics
PHY2212H	Entanglement Physics
PHY2303H	Quantum Theory of Solids II
PHY2314H	Special Topics in Condensed Matter Physics
PHY2315H	Advanced Statistical Mechanics
PHY2321H	Many Body Physics I
PHY2322H	Many Body Physics II
PHY2403H	Quantum Field Theory I
PHY2404H	Quantum Field Theory II
PHY2405H	Experimental High Energy Physics
PHY2406H	Special Topics in Particle Physics
PHY2407H	Special Topics in Particle Physics
PHY2408H	Phenomenology of the Standard Model
PHY2502H	Climate System Dynamics
PHY2504H	Geophysical Fluid Dynamics
PHY2505H	Atmospheric Radiative Transfer and Remote Sounding
PHY2506H	Data Assimilation and Retrieval Theory
PHY2509H	Special Topics in Atmospheric Physics
PHY2603H	Inverse Theory
PHY2609H	Planetary Physics
PHY2707H	Cellular and Molecular Biophysics I
PHY2708H	Cellular and Molecular Biophysics II
PHY2709H	Quantitative Biology of Systems, Organisms, and Populations
PHY2710H	Computational Methods in Biophysics
PHY2711H	Biophysical Techniques
PHY2720H	Special Topics in Biological Physics
PHY2721H	Special Topics in Biological Physics
JPE2605H	Advanced Seismology

Report Course for MSc Students

Course Code	Course Title
PHY3400Y	Selected Topics in Physics

Seminar Courses

Course Code	Course Title
PHY7001Y	Atmospheric Physics Seminar
PHY7002Y	Biophysics Seminar
PHY7003Y	Condensed Matter Physics Seminar
PHY7004Y	Geophysics Seminar
PHY7005Y	Quantum Optics Seminar
PHY7007Y	Subatomic Physics and Astrophysics Seminar

Research Courses

Course Code	Course Title
PHY6011Y	Research in Atmospheric Physics
PHY6021Y	Research in Biophysics
PHY6031Y	Research in Condensed Matter Physics
PHY6041Y	Research in Geophysics
PHY6051Y	Research in Quantum Optics
PHY6071Y	Research in Subatomic Physics and Astrophysics

Physiology

Physiology: Introduction

Faculty Affiliation

Medicine

Degree Programs

Medical Physiology

MHSc

Physiology

MSc and PhD

Combined Degree Programs

MD / PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Biomedical Engineering** (admissions have been administratively suspended)
  - Physiology, MSc, PhD
- **Cardiovascular Sciences**
  - Physiology, MSc, PhD
- **Developmental Biology**
  - Physiology, MSc, PhD
- **Neuroscience**
  - Physiology, MSc, PhD
- **Resuscitation Sciences** (admissions have been administratively suspended)
  - Physiology, MSc, PhD

Overview

In the Department of Physiology, research ranges from the gene level to the organism level in areas including endocrinology and diabetes; reproduction endocrinology; fetal physiology, pregnancy, and parturition; neuroendocrinology; cardiorespiratory regulation; gastrointestinal motility; sensory physiology; motor control; brain development and aging; ionic channels and synaptic transmission; excitability, ultrastructure, and plasticity of the brain.

Contact and Address

MHSc Program

Web: www.physiology.utoronto.ca
Email: mhsc.physiology@utoronto.ca
Telephone: (416) 978-6843
Fax: (416) 978-4940

Department of Physiology
University of Toronto
Room 3209, Medical Sciences Building
1 King's College Circle
Toronto, Ontario M5S 1A8 Canada

MSc and PhD Programs

Web: www.physiology.utoronto.ca
Email: graduate.physiology@utoronto.ca
Telephone: (416) 978-2601
Fax: (416) 978-4940

Department of Physiology
University of Toronto
Room 3217, Medical Sciences Building
1 King's College Circle
Toronto, Ontario M5S 1A8 Canada

Physiology: Graduate Faculty

Full Members

Adeli, Khosrow - DipChem, MSc, PhD
Anderson, Harvey - BSc, MSc, PhD
Bagli, Darius - BS, MD
Bains, Jaideep - BSc, SM, PhD
Barr, Cathy - BSc, PhD
Bear, Christine - BSc, MSc, PhD
Belik, Jaques - MD
Belsham, Denise - PhD
Billia, Filio - BSc, MSc, MD, PhD
Bolz, Steffen-Sebastian - MD, DrMed
Brown, Theodore - BSc, PhD
Caniggia, Isabella - MD, PhD
Carlen, Peter - MD
Cherney, David - MD, PhD
Collingridge, Graham - BSc, PhD
Connelly, Kim - MBBS, PhD
Cox, Brian - BSc, MSc, PhD
dos Santos, Claudia - MSc, MD
Duffin, James - BASc, MASc, PhD
Eubanks, James - BSc, AA, PhD
Feng, Zhong-Ping - PhD ***(Graduate Coordinator, Student Admissions and Affairs)***
Ferguson, Niall - MSc, MD
Frankland, Paul - MA, PhD
Gaisano, Herbert - BS, MD
Giacca, Adria - MD
Gillis, Jesse - BSc, MSc, PhD
Goldenberg, Neil - BSc, MD, PhD
Gollob, Michael - MD

Gramolini, Anthony - BSc, MSc, PhD ***(Graduate Coordinator, Academic Affairs)***
Hare, Gregory - MD, PhD
Harrison, Robert - DSc, PhD
Hay, Etay - BSc, MSc, PhD
Heximer, Scott - PhD ***(Chair and Graduate Chair until December 31, 2024)***
Hill, Sean - BA, PhD
Horner, Richard - BSc, PhD
Husain, Mansoor - MB, MD
Hutchison, William Duncan - BSc, MSc, PhD
Ivakine, Evgueni (Zhenya) - MSc, MSc, PhD
Jia, Zhengping - PhD
Jin, Tianru - PhD
Jones, Nicola - MD
Josselyn, Sheena - MA, PhD
Jurisicova, Andrea - PhD
Kadis, Darren - BSc, MA, PhD
Kingdom, John - DipCH, MB, MD
Klip, Amira - ScD
Lam, Tony - BS, DPhil
Lambe, Evelyn - AB, MSc, PhD
Levitan, Robert - MSc, MDCM
Li, Ren-Ke - MD, MHSc, MSc, PhD
Librach, Clifford - MD
Liu, Fang - PhD
Liu, Mingyao - MSc, MD
Lye, Stephen - BSc, PhD
Matthews, Stephen - BSc, DPhil
McGahan, Anita - BA, MA, MBA, PhD
McGowan, Patrick - BSc, MA, PhD
Miller, Freda - BSc, PhD
Monnier, Philippe - MBA, PhD
Nostro, Cristina - MSc, PhD
Orser, Beverley - MD, PhD
Palmert, Mark - MD
Peever, John - MSc, PhD
Post, Martin - PhD
Prescott, Steven - BSc, MD, MSc, PhD
Rocheleau, Jonathan - BSc, PhD
Rosenblum, Norman - MD
Salter, Michael - MD, PhD
Seed, Mike - MBBS
Sessle, Barry - BDS, BS, MDS, PhD
Skinner, Frances - PhD
Steinberg, Benjamin - MD, PhD
Subbarao, Padmaja - MD
Sugita, Shuzo - PhD
Sun, Hong-Shuo - MSc, DrMed, DPhil
Sweezey, Neil - BSc, MD, MD
Thomas, Scott - BSc, MSc, PhD
Tripathy, Shreejoy - BSc, PhD
Tweed, Douglas - MD, PhD, PhD
Wang, Lu-Yang - PhD ***(Vice Chair, Academic - Graduate)***
Wheeler, Michael - BSc, PhD
Wilson, Gregory - MSc, MD
Wittnich, Carin - MSc, DVM
Zhang, Haibo - MSc, PhD
Zhen, Mei - PhD
Zhuo, Min - MS, PhD

Members Emeriti

Adamson, Susan - BSc, MD, MSc, PhD
Atwood, Harold - BA, MA, DSc, PhD, FRSC
Bocking, Alan - MD
Brubaker, Patricia - BSc, PhD
Casper, Robert - MD
Challis, John - BSc, DSc, PhD, FRSC
Charlton, Milton - BSc, MSc, PhD
Dostrovsky, Jonathan - BSc, MSc, PhD
Fisher, Joseph - MD
Kwan, Hon - BASc, MSc, PhD
Mount, Howard - BSc, PhD
Norwich, Kenneth - MSc, PhD
Pennefather, Peter - BSc, PhD
Schlichter, Lyanne - BSc, MSc, PhD
Sole, Michael - BSc, MD
Stanley, Elise - PhD
Wojtowicz, J. Martin - BSc, PhD

Associate Members

Ameis, Stephanie - BA, MD, MSc
Balki, Mrinalini - MBBS
Chauhan, Vijay - MD
De Pitta, Maurizio - SM, PhD
Friedberg, Mark - MD
Goligher, Ewan - DrMed, PhD
Gonska, Tanja - MD
Lankarany, Milad - PhD
MacDonald, Tara - BSc, MSc, PhD
Mazer, Cyril David - MD
McKinnon, Nicole - MS, MD, PhD
McVey, Mark - BSc, MSc, MD
Miliotis, Helen - BSc, PhD ***(Director, MHSc in Medical Physiology)***
Ni, Heyu - MSc, MD, PhD
O'Brien, Catherine - BSc, MSc, DrMed, PhD
Pierro, Agostino - MD
Prentice, Kacey - BSc, PhD
Ramsey, Amy - PhD
Shynlova, Oksana - MSc, PhD
Taxidis, Jiannis - MSc, PhD
Vanderlaan, Rachel - BS, MD, PhD, FRSC
Yuen, Darren - BSc, MD, PhD

Physiology: Medical Physiology MHSc

A near-infinite amount of data is generated by clinicians at the bedside, researchers at the bench, and emergent health technologies every single day. But who can interpret that data and render it relevant for use?

The **Master of Health Science (MHSc) in Medical Physiology** is a 12-month professional master's program specially designed to address this rapidly emerging need. Featuring core courses and electives led by the Department of Physiology's world-class faculty, the program also includes significant professional development training and culminates with a practicum in an industry, hospital, or government setting.

The program blends advanced topic-specific physiology courses of the students' choosing with:

- a mentored current literature review, where graduates acquire the critical analysis skills to identify new knowledge relevant to specific problems in human health;
- a big data and health course, where students gain the skills to analyze and interpret data sets relevant to human health;

- a commercialization and collaboration course, where students will acquire skills to understand how to commercialize new discoveries and how to work in a team science environment; and
- a practicum opportunity, where students will experience how physiological knowledge is applied to real-life scenarios in their area of interest.

This unique combination of coursework and hands-on experience ensures that graduates are equipped with the knowledge and skills sought by today's competitive health-related workforce.

MHSc Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Physiology's additional admission requirements stated below.
- Admission is based on demonstrated exceptional scholarly achievement based on the following criteria:
  - a one-page statement summarizing how this program will contribute to the advancement of the applicant's professional goals
  - a curriculum vitae (CV)
  - two letters of reference.
- Applicants must have an appropriate bachelor's degree from a recognized university with an average of at least A– in the last two years of study. Students must have completed at least third year-level physiology or equivalent courses and demonstrate an interest in physiology.
- Selected applicants will be interviewed prior to final acceptance into the program.
- Applicants who were educated outside Canada, whose primary language is not English, and who graduated from a university where the language of instruction was not English, must demonstrate proficiency in the English language through the successful completion of the Test of English as a Foreign Language (TOEFL) with the following minimum scores:
  - Internet-based TOEFL: 100/120 and 22/30 on the writing and speaking sections.
  - Other English proficiency tests are acceptable. Please consult the Physiology website for departmental standards.

Completion Requirements

All students are required to:

- Take **6.0 full-course equivalents (FCEs)** in physiology courses:
  - PSL4000Y *Seminars and Graduate Professional Development*
  - PSL4010Y *Mentored Literature Review Project in Physiology*
  - PSL4020Y *Medical Physiology Practicum*
  - PSL4030H *Clinical Physiology*
  - PSL4040H *Big Data and Health*
  - PSL4050H *Collaboration and Commercialization in Physiology*
  - 1.5 elective FCEs.

Students will be matched with a mentor and practicum placement in consultation with the relevant course director and MHSc program director.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

Physiology: Physiology MSc

The **Master of Science (MSc) program** provides advanced training in physiology, with an emphasis on gaining experience in conducting research using modern experimental methods under the direct supervision of a member of the department's graduate faculty. Students will complete coursework, attend and give presentations of scientific work, submit a written thesis based on original research, and defend the thesis at an oral examination. It is not required that the thesis work be published or represent a finished research project, but it must show the student's mastery of specific techniques, their application to a specific problem, and a scholarly understanding of the research subject. Through this program, students will broaden and deepen their knowledge of physiology and its current scientific literature. They will learn and practise scientific skills of critical thinking, devising research questions, and communicating scientific ideas orally and in writing.

Students may begin in Fall, Winter, or Summer.

MSc Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Physiology's additional admission requirements stated below.
- Admission is based on academic record, an essay summarizing background strengths and scientific aims, a curriculum vitae (CV), and at least two confidential letters of reference.
- Applicants must have an appropriate bachelor's degree from a recognized university with an average of at least A– in the last two years of study and with courses such as biology, biochemistry, calculus, organic and physical chemistry, general physics, and physiology.
- Physical-science-stream students from undergraduate programs in physics, mathematics, engineering, and other sciences are encouraged to apply to the MSc program.
- Applicants who were educated outside Canada, whose primary language is not English, and who graduated from a university where the language of instruction was not English, must demonstrate proficiency in the English language through the successful completion of the Test of English as a Foreign Language (TOEFL) with the following minimum scores:
  - Internet-based TOEFL: 100/120 and 22/30 on the writing and speaking sections.

- Other English proficiency tests are acceptable. Please consult the Physiology website for departmental standards.

Completion Requirements

All students are required to:

- Take **1.5 full-course equivalents (FCEs)** in physiology courses, with the following guidelines:
  - PSL1000H *MSc Seminars in Physiology*, mandatory for all graduate students in Physiology.
  - 0.5 FCE in physiology graduate-only courses.
  - 0.5 FCE with a choice of (i) a physiology graduate-only course or physiology joint graduate-undergraduate course (preferable option) or (ii) a course taken in another department (rare choice).
- Select courses in consultation with the supervisor and/or advisory committee. See the Physiology website for details.
- Complete and defend a **research thesis** acceptable to the graduate department.
- Do one of the following within 12 to 18 months in the MSc program:
  - Write and defend an MSc thesis and graduate.
  - Write and defend a thesis and go on to the PhD program.
  - Transfer from the MSc into the PhD program. Transfer is encouraged for students who have made substantial progress in their research and have demonstrated the desire and potential to meet the requirements of a rigorous research training program. Such students will have fulfilled all course requirements for the MSc with at least an A– average and have demonstrated potential for publication of their work. There must be a clearly identified program for future research that continues, or is consistent with, work already underway. Too large a project for the MSc is not a reason for transfer to the PhD.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Physiology: Physiology PhD

The **Doctor of Philosophy (PhD) degree** is an advanced research degree. Upon its completion, graduates are expected to function as independent research scientists. Students will complete coursework, attend and give multiple presentations of scientific work, and demonstrate the ability to carry out research of publishable quality as evidenced by a written thesis based on original research and an oral defence of the work. Through this program, students will broaden and deepen their knowledge of physiology and its current scientific literature. They will develop and practise scientific skills of critical thinking, devising research questions, understanding experimental design, techniques, and analysis, and communicating scientific ideas orally and in writing.

Applicants may enter the PhD program via one of three routes: 1) following completion of an appropriate MSc degree; 2) transfer from the University of Toronto MSc program in Physiology; or 3) direct entry after completing a bachelor's degree.

Students may begin or transfer in Fall, Winter, or Summer.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Physiology's additional admission requirements stated below.
- Admission is based on academic record, a statement summarizing background strengths and scientific aims, a curriculum vitae (CV), and at least two confidential letters of reference.
- Students may be admitted into the PhD program after completion of an appropriate MSc degree program with an average of at least A– from a recognized university. Students with excellent research experience are encouraged to apply.
- Applicants should have taken courses such as biology, biochemistry, calculus, organic and physical chemistry, general physics, and physiology.
- Applicants who were educated outside Canada, whose primary language is not English, and who graduated from a university where the language of instruction was not English, must demonstrate proficiency in the English language through the successful completion of the Test of English as a Foreign Language (TOEFL) with the following minimum scores:
  - Internet-based TOEFL: 100/120 and 22/30 on the writing and speaking sections.
  - Other English proficiency tests are acceptable. Please consult the Physiology website for departmental standards.

Completion Requirements

- Students must take **2.5 full-course equivalents (FCEs)** in physiology courses in which an average standing of at least A– is maintained, with the following guidelines:
  - PSL2000H *PhD Seminars in Physiology*, mandatory for all graduate students in Physiology.
  - 0.5 FCE in physiology graduate-only courses.
  - PSL1066H *Research Grant Proposal*, mandatory for all PhD students in physiology.
  - 1.0 FCE with a choice of (i) a physiology graduate-only course or physiology joint graduate-undergraduate course (preferable option) or (ii) a course taken in another department (rare choice).
- Up to 1.0 FCE can be claimed from the student's MSc program completed in another department or university, subject to approval by the Graduate Studies Committee.
- Courses are selected in consultation with the supervisor and/or advisory committee. See the Physiology website for details.

- The recommended completion time for the doctoral program is approximately four years, by which time the candidate will write and defend a research thesis, first before a departmental committee and subsequently before a committee approved by the School of Graduate Studies.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- Students may be admitted via transfer from the University of Toronto MSc program in Physiology. Transfer from the MSc into the PhD program is encouraged for students who have made substantial progress in their research and have demonstrated the desire and potential to meet the requirements of a rigorous research training program. Such students will have fulfilled all course requirements for the MSc with at least an A- average and have demonstrated potential for publication of their work. Students with excellent research experience are encouraged to apply. There must be a clearly identified program for future research that continues, or is consistent with, work already underway Too large a project for the MSc is not a reason for transfer to the PhD.

Completion Requirements

- Students must take **2.5 full-course equivalents (FCEs)** in physiology courses in which an average standing of at least A- is maintained, with the following guidelines:
  - PSL2000H *PhD Seminars in Physiology*, mandatory for all graduate students in Physiology.
  - PSL1066H *Research Grant Proposal*, mandatory for all PhD students in Physiology.
  - 0.5 FCE in physiology graduate-only courses.
  - 1.0 FCE with a choice of (i) a physiology graduate-only course or physiology joint graduate-undergraduate course (preferable option) or (ii) a course taken in another department (rare choice).
  - Students who transfer from the MSc program in Physiology may claim up to 1.0 FCE from the MSc program in Physiology.
- Courses are selected in consultation with the supervisor and/or advisory committee. See the Physiology website for details on course requirements.
- The recommended completion time for the doctoral program is approximately five years from the start of the MSc, by which time the candidate will write and defend a research thesis, first before a departmental committee and subsequently before a committee approved by the School of Graduate Studies.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Physiology's additional admission requirements stated below.
- Admission is based on academic record, a statement summarizing background strengths and scientific aims, a curriculum vitae (CV), and at least two confidential letters of reference.
- For exceptional students with an A– standing in appropriate courses taken during the two preceding undergraduate years, direct entry into the doctoral program is possible. However, this will require specific approval by the Graduate Studies Committee. Students with excellent research experience are encouraged to apply.
- Applicants should have taken courses such as biology, biochemistry, calculus, organic and physical chemistry, general physics, and physiology.
- Applicants who were educated outside Canada, whose primary language is not English, and who graduated from a university where the language of instruction was not English, must demonstrate proficiency in the English language through the successful completion of the Test of English as a Foreign Language (TOEFL) with the following minimum scores:
  - Internet-based TOEFL: 100/120 and 22/30 on the writing and speaking sections.
  - Other English proficiency tests are acceptable. Please consult the Physiology website for departmental standards.

Completion Requirements

- Students must take **2.5 full-course equivalents (FCEs)** in physiology courses in which an average standing of at least A– is maintained, with the following guidelines:
  - PSL2000H *PhD Seminars in Physiology*, mandatory for all graduate students in Physiology.
  - 0.5 FCE in physiology graduate-only courses.
  - PSL1066H *Research Grant Proposal*, mandatory for all PhD students in physiology.
  - 1.0 FCE with a choice of (i) a physiology graduate-only course or physiology joint graduate-undergraduate course (preferable option) or (ii) a course taken in another department (rare choice).
- Courses are selected in consultation with the supervisor and/or advisory committee. See the Physiology website for details.

- The recommended completion time for the doctoral program is five years, by which time the candidate will write and defend a research thesis, first before a departmental committee and subsequently before a committee approved by the School of Graduate Studies.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Physiology: Medical Physiology MHSc; Physiology MSc, PhD Courses

Not all courses are offered each year. Check the departmental website for course availability and course requirements.

Course Code	Course Title
JCV1060H	Developmental Cardiovascular Physiology
JCV3060H	Advanced Topics in Cardiovascular Sciences — Molecular Biology and Heart Signal Transduction
JCV3061H	Advanced Topics in Cardiovascular Sciences — Hormones
JCV3062H	Advanced Research in Cardiovascular Sciences — Heart Function
JCV3063H	Advanced Research in Cardiovascular Sciences — Vascular
JCV3064H	Advanced Research in Cardiovascular Sciences — Microvascular Medicine
JCV3065H	Advanced Topics in Cardiovascular Sciences — Systems Biology
JPB1071H	Advanced Topics: Computational Neuroscience
JYG1555H	Advanced Topics: Cellular and Molecular Neurobiology
PSL1000H	MSc Seminars in Physiology
PSL1014H	Advanced Topics: the Gastrointestinal Epithelium
PSL1024H	Advanced Topics: Neuroendocrinology
PSL1026H	Advanced Topics: Experimental Cell Physiology
PSL1034H	Advanced Topics: Metabolic Disorders
PSL1036H	Advanced Topics: Respiration
PSL1040H	Advanced Topics: Systems Biology in Physiology
PSL1047H	Advanced Topics: Somatosensory and Pain Neuroscience
PSL1050H	Advanced Topics: The Hippocampus from Cell to Behaviour
PSL1053H	Advanced Topics: Critical Assessment of Ion Channel Function
PSL1066H	Research Grant Proposal
PSL1067H	Advanced Topics: Advances and Techniques in Developmental Physiology
PSL1068H	Advanced Topics: Molecular Basis of Behaviour
PSL1070H	Advanced Topics: Hormone Action
PSL1072H	Advanced Topics in the Neural Basis for Sensation
PSL1075H	Biology in Time
PSL1080H	Advanced Topics: Investigative Developmental Physiology
PSL1086H	Comparative Systems Approach to Diving Physiology
PSL2000H	PhD Seminars in Physiology
PSL4000Y	Seminars and Graduate Professional Development
PSL4010Y	Mentored Literature Review Project in Physiology
PSL4020Y	Medical Physiology Practicum
PSL4030H	Clinical Physiology
PSL4040H	Big Data and Health
PSL4050H	Collaboration and Commercialization in Physiology

Joint Graduate/Undergraduate

Course Code	Course Title
JNR1444Y	Fundamentals of Neuroscience: Cellular and Molecular
JNS1000Y	Fundamentals of Neuroscience: Systems and Behaviour
PSL1421H	Pregnancy and Birth: From Implantation to Newborn Life
PSL1425H	Integrative Metabolism and Its Endocrine Regulation
PSL1432H	Theoretical Physiology
PSL1441H	Systems Level Neuroplasticity
PSL1445H	Mechanistic Molecular and Cellular Neuroscience

Course Code	Course Title
PSL1446H	Molecular and Cellular Aspects of Neural Disorders
PSL1452H	Fundamentals of Ion Channel Function
PSL1462H	Molecular Aspects of Cardiovascular Function

Political Science

Political Science: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Political Science

MA

- Fields:
  - Political Science;
  - Political Theory

PhD
Note: admissions to the transfer option have been administratively suspended.

- Fields:
  - Canadian Politics;
  - Comparative Politics;
  - Development Studies;
  - International Relations;
  - Political Theory;
  - Public Policy

Combined Degree Programs

STG, Law, JD / Political Science, PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Contemporary East and Southeast Asian Studies**
  - Political Science, MA
- **Development Policy and Power**
  - Political Science, MA
- **Diaspora and Transnational Studies**
  - Political Science, MA, PhD
- **Environmental Studies**
  - Political Science, MA, PhD
- **Ethnic, Immigration and Pluralism Studies**
  - Political Science, MA, PhD
- **Global Health (U of T Global Scholar)**
  - Political Science, PhD
- **Jewish Studies**
  - Political Science, MA, PhD
- **Sexual Diversity Studies**
  - Political Science, MA, PhD
- **South Asian Studies**
  - Political Science, PhD
- **Women and Gender Studies**
  - Political Science, MA, PhD

Overview

The Department of Political Science is one of the largest political science departments in the western world. It is committed to fostering a collegial environment for graduate students and personal interaction between faculty and students.

The department has a large and academically diverse research-oriented faculty, well represented in the various sub-fields of the discipline (Political Theory, International Relations, Comparative Politics, Development Studies, Canadian Politics, and Public Policy). The department also participates in a wide range of interdisciplinary graduate programs.

Since entrance requirements and standards of work are high, so is the calibre of students. Many hold prestigious fellowships, and several have recently won major awards, including the Canadian Political Science Association and American Political Science Association's prizes for best doctoral theses in their areas.

Graduates have gone on to academic careers, public service, and other work in all provinces of Canada, the United States, and many other countries. The University maintains an active placement service to assist graduate students seeking employment in the academic world. Graduate students have established the Graduate Association for Students in Political Science to foster intellectual exchanges, social events, and student participation in all aspects of department life.

Contact and Address

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Department of Political Science
University of Toronto
Room 3025, 100 St. George Street
Toronto, Ontario M5S 3G3 Canada

Political Science: Graduate Faculty

Full Members

Adler, Emanuel - MA, PhD, FRSC
Ahmad, Aisha - BA, MA, PhD
Balot, Ryan - BA, AM, PhD (Chair)
Bashevkin, Sylvia - BA, MA, PhD, FRSC
Bathelt, Harald - MA, PhD, CRC
Beiner, Ronald - BA, DPhil
Bernstein, Steven - PhD
Bertoldi, Nancy - BA, MA, PhD
Bertrand, Jacques - BA, MA, MSc, DrRerPol
Besco, Randy - BA, MA, PhD

Braun, Aurel - BA, MA, PhD
Breznitz, Dan - BA, PhD
Cameron, David - PhD, FRSC
Chambers, Simone - BA, MPH, MA, PhD
Chyzh, Olga - PhD
Clark, Janine Astrid - BES, MA, PhD
Cochrane, Christopher Brian - BA, MA, PhD
Cook, David - BA, MA, PhD
Craft, Jonathan - MA, PhD
Dancy, Geoffrey - PhD
Day, Richard - BA, MA, PhD
Deber, Raisa - BS, MS, PhD
Deibert, Ronald - BA, MA, PhD
Donnelly, Michael - BA, MSS, DrRerPol
Enright, Theresa - BA, PhD ***(Director of Graduate Studies)***
Eyoh, Dickson - MA, PhD
Fu, Diana Xuan - BA, MPH, PhD
Gilady, Lilach - BA, MA, MPH, PhD
Green, Jessica - PhD, PhD
Gunitskiy, Seva - BA, MA, MPH, PhD
Haddow, Rodney - BA, MSc, PhD
Handley, Antoinette - BA, MPH, PhD
Hansen, Randall - BA, MPH, PhD, CRC
Hirschl, Ran - BA, LLB, MA, MPH, PhD, CRC
Hoffmann, Matthew - BSc, PhD
Homer-Dixon, Thomas - BA, PhD
Hossein, Caroline S. - LLB, MPA, PhD
Jung, Courtney - BA, MA, PhD
Kingston, Paul - BA, MA, MPH, DPhil
Kingston, Rebecca - BA, MA, PhD
Kirton, John - BA, MA, PhD
Kohn, Margaret - BA, MA, PhD ***(Graduate Chair)***
Kuokkanen, Rauna - MA, MA, PhD
Lipscy, Phillip - PhD
Loewen, Peter - PhD
Magocsi, Paul - BA, MA, MA, PhD, FRSC
Manger, Mark - DrRerPol
Marshall, Ruth - BA, MA, DPhil
McCarney, Patricia - BA, MCP, PhD
Murali, Kanta - BA, PhD
Nacol, Emily Catherine - BA, MA, MPH, PhD
Nedelsky, Jennifer R. - BA, MA, PhD
Neville, Kate - PhD, PhD
Nevitte, Neil - BA, MA, PhD, FRSC
Norrlof, Carla - BS, MIR, MS, DrRerPol
Olive, Andrea - PhD
Ong, Lynette - BA, AM, PhD
Onoma, Ato Kwamena - DPhil
Orbinski, James - BSc, MA, MD
Orwin, Clifford - AB, AM, PhD
Pauly, Louis - BA, MA, MSc, MSc, PhD, CRC, FRSC
Prichard, Wilson R.S - BA, MPH, DPhil
Rayside, David - BA, AM, PhD
Renckens, Stefan - BS, MPH, PhD
Rheault, Ludovic - PhD
Roach, Kent - BA, LLB, LLM
Roberts, Neil Douglas - BA, BA, MA, MA, PhD, PhD
Sabl, Andrew - PhD
Schatz, Edward - PhD
Schertzer, Robert Stephen - BS, MSc, ScD
Schneiderman, David - BA, LLB, LLM
Shachar, Ayelet - LLB, BA, LLM, SJD
Shanks, Torrey - BA, PhD
Skogstad, Grace - DrRerPol
Smith, Alison - BA, MA, PhD
Stein, Janice - BA, MA, PhD, OC, FRSC
Teichman, Judith Ann - BA, MA, PhD
Tolley, Erin - PhD
Triadafilopoulos, Triadafilos - BA, MA, PhD
Turner, Dale - PhD
Vipond, Robert - BA, MA, AM, PhD
Wai, Zubairu - BA, MA, PhD
Way, Lucan Alan - BA, PhD
Weinrib, Lorraine - BA, LLB, LLM
White, Graham - BA, MA, PhD
White, Linda - BA, MA, PhD
Williams, Melissa - AB, AM, PhD
Wolfe, David - BA, MA, PhD
Wong, Joseph - BA, MA, PhD, CRC
Wong, Wendy - MA, PhD

Members Emeriti

Andrew, Edward - BA, PhD
Barker, Jonathan - PhD
Carens, Joseph - AB, MPH, MPH, PhD
Donnelly, Michael - BSc, MA, PhD
Falkenheim, Victor - AB, MA, PhD
Griffiths, Franklyn J.C. - BA, MIA, PhD
Horowitz, Gad - BA, PhD
Indart, Gustavo - BA, MA, PhD
Kontos, Alkis - MA, PhD
LeDuc, Lawrence - BA, MA, PhD
Manzer, Ronald - BEd, BA, MA, PhD
Matthews, Robert - BA, MIA, PhD
Russell, Paul - BA, BEd, MA
Solomon, Peter - BA, MA, PhD
Solomon, Susan - BA, MA, PhD
Stren, Richard - BA, MA, PhD

Associate Members

Anderson, Noel - BA, PhD
Ariga, Kenichi - MA, MCP, PhD
Bernhardt, Nicole - BA, MA, PhD
Borins, Sandford - BA, PhD
Campisi, Julian - BA, MA, PhD
Chang Quiroz, Arturo - BA, MA, PhD
Compaore, Nadege - BA, MA, PhD
Cowie, Chadwick - BA, MSc
Ewing, Connor - PhD, PhD, PhD
Guzzini, Stefano - PhD
Kahraman, Filiz - BA, MA, PhD
Kaufmann Nedal, Dani - DPhil
McElroy, Brendan - DPhil
Mendez Gutierrez, Maria - DPhil
Merkley, Eric - PhD, PhD
Nieman, Mark - PhD
Pavone, Tommaso - BA, MA, DrRerPol
Philips, Menaka - PhD
Reisenbichler, Alexander - BA, MA, PhD
Schramm, Madison - DPhil
Sevi, Semra - PhD
Stark, Andrew - BA, AM, MSc, PhD
Subramanian, Narendra - PhD
Wu, Nicole Ka Wing - PhD

Political Science: Political Science MA

The **Master of Arts (MA) program** is designed to satisfy the diverse interests of students who wish to pursue a year of graduate study in political science.

Students admitted to the MA program may choose from the fields in Political Science and Political Theory. Students whose interests are primarily normative and philosophical may choose the field of Political Theory.

The MA program may be taken on a full-time or part-time basis.

Political Science: Political Science MA; Field: Political Science

Field: Political Science

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Political Science's additional admission requirements stated below.
- Cumulative grade average equivalent to a University of Toronto B+ or better in an appropriate bachelor's degree program. Preference will be given to applicants with outstanding academic records and a strong background in political science.
- Admission is competitive. Enrolment in the program is limited, and meeting minimum requirements does not guarantee admission. All applicants are considered on their individual merit by a departmental admissions committee. Applicants lacking an adequate background in political science may be required to complete additional undergraduate courses before being considered for admission. Such work should be undertaken in consultation with the MA supervisor.
- Applicants must submit a complete application according to instructions on the department's website.

Completion Requirements

- **Coursework.** Students must complete a minimum of **4.0 full-course equivalents (FCEs)** including:
  - 0.5 FCE: a Political Theory course or a methods course. Students enrolled in a collaborative specialization (CS) may take a theory course, a methods course, or a course that counts towards the CS.
  - At least 0.5 FCE in statistics or research design. POL2503H *Thinking Through Research Design* and POL2504H *Statistics for Political Scientists* are among the courses currently offered by the department which meet this requirement.
  - The equivalent of 1.0 FCE may be taken in a cognate discipline with the approval of the department.
  - A research essay (1.0 FCE) within the context of the *MA Research Seminars*, POL2810Y *MA Research Seminar I*, or POL2811Y *MA Research Seminar II*. Students enrolled in a collaborative specialization with a similar requirement are exempted.
- Programs in which additional requirements or prerequisites must be met may take longer than three sessions to complete.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time; 6 years part-time

Political Science: Political Science MA; Field: Political Theory

Field: Political Theory

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Political Science's additional admission requirements stated below.
- Cumulative grade average equivalent to a University of Toronto B+ or better in an appropriate bachelor's degree program. Preference will be given to applicants with outstanding academic records and a strong background in political science.
- Admission is competitive. Enrolment in the program is limited, and meeting minimum requirements does not guarantee admission. All applicants are considered on their individual merit by a departmental admissions committee. Applicants lacking an adequate background in political science may be required to complete additional undergraduate courses before being considered for admission. Such work should be undertaken in consultation with the MA supervisor.
- Applicants must submit a complete application according to instructions on the department's website.

Completion Requirements

- **Coursework.** Students must complete a minimum of **4.0 full-course equivalents (FCEs)** as follows:
  - 2.0 FCEs in Political Theory.
  - At least 1.0 FCE in an area outside Political Theory.
  - The equivalent of 1.0 FCE may be taken in a cognate discipline with the approval of the department.
  - All courses must be chosen in consultation with the MA supervisor.
- Programs in which additional requirements or prerequisites must be met may take longer than three sessions to complete.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time; 6 years part-time

Political Science: Political Science PhD

Applicants may be admitted to the **Doctor of Philosophy (PhD) program** via one of three routes:

- **With an MA**: excellent students who have completed an MA degree in political science (or its equivalent) by the time of enrolment.
- **Transfer**: in exceptional cases, on the initiative of the Director of Graduate Studies, MA students may be transferred to the PhD program. Such transfers will occur only where a full assessment of an applicant's bachelor's record (or equivalent) was impossible and where that student's instructors concur that the student in question has excelled in the first half of the MA program.
- **Direct-entry**: exceptional students who have completed an appropriate bachelor's degree with a concentration in political science by the time of enrolment. Students admitted to the PhD from a bachelor's degree who receive less than an A– average in their first four courses will be recommended to SGS to transfer to the MA program. If the transfer is approved, these students will graduate with a terminal MA, provided their grades meet the requirements for the MA degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Political Science's additional admission requirements stated below.
- Applicants must have completed an MA degree in political science (or its equivalent) by the time of enrolment.
- Applicants are expected to have achieved grades averaging A– or better in their most recent degree.
- Applicants must submit a complete application according to the instructions.

Completion Requirements

- **Coursework.** Students must complete **3.0 to 5.0 full-course equivalents (FCEs)** depending on the student's relevant background in the fields or areas of choice:
  - Most students entering with an MA take the equivalent of 4.0 FCEs to satisfy program requirements; students must take a minimum of 3.0 FCEs with the department after entering the PhD program.
  - Graduate courses taken at the MA level at the University of Toronto or elsewhere may be counted, with the department's permission, towards meeting some course requirements.
- Students will declare two fields:
  - **Field 1** will be one of Canadian Politics, Comparative Politics, Development Studies, International Relations, Political Theory, or Public Policy. The normal course requirement for Field 1 will be 2.0 FCEs, including a 1.0 FCE core course requirement.
  - **Field 2** will be one of Canadian Politics, Comparative Politics, Development Studies, International Relations, Political Theory, or Public Policy. The normal course requirement for Field 2 will be 1.5 FCEs, including a 1.0 FCE core course requirement.
- The Director of Graduate Studies may exercise discretion to waive the Field 2 requirement for students enrolled in collaborative specializations.
- Students who do not designate Political Theory as Field 1 must complete 0.5 graduate-level FCE in Political Theory.
- Students must complete 0.5 FCE in qualitative methods. This requirement may be waived on the basis of MA work.
- Students who do not designate Political Theory as Field 1 must complete 0.5 FCE in quantitative methods. This requirement may be waived on the basis of MA work. Students who designate Political Theory as Field 1 will substitute a non-waivable 0.5 FCE intensive reading requirement for the quantitative methods requirement.
- Students must complete POL2812Y *PhD Research Design*, normally during Year 3; students who have designated Political Theory as Field 1 are exempted.
- **Field examinations.**
  - Students must complete field examinations in Field 1 and Field 2 by the end of Year 2.
  - The Field 1 examination should be taken in May or August of the year in which the core course is taken as long as all assignments in the core course have been completed.
  - The Field 2 examination must be taken no later than Year 2.
  - A student who fails to achieve a grade of at least A– is permitted one opportunity to retake a field examination. After failing the examination once, the student is permitted two attempts to pass the examination in a new field.
- **Thesis proposal, thesis committee, and thesis schedule.** Students should assign a high priority to defining a thesis topic and choosing a thesis committee. By December of Year 3, students must have:
  - Established a thesis committee of three faculty members including a thesis supervisor and
  - Completed a draft of a thesis proposal of approximately 25 pages for submission to the thesis committee. Final revisions of the proposal must be approved by the end of Year 3. The research and writing of the thesis will follow the acceptance of the thesis proposal. The work schedule should permit the student to complete the thesis by the end of Year 5.
- **Language requirement.** Students must demonstrate competence in the language that is appropriate to the nature of the graduate work in which they are engaged. Students whose Field 1 is Canadian Politics are strongly encouraged to demonstrate competence in French.
- University policy requires that students complete all their non-thesis requirements (coursework, thesis proposal, Field 1 and Field 2 qualifying exams, and language requirements) by the end of Year 3.
- Students must achieve an A– average in coursework and an A– in their field examinations to remain in good standing.

- Minimum of three sessions in **residence**, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.
- Although the program has been designed for completion in four years, some students may require longer to complete all the requirements.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

- In exceptional cases, on the initiative of the Director of Graduate Studies, MA students may be transferred to the PhD program.
- Applicants are expected to have achieved grades averaging A– or better in their most recent degree.
- Applicants must submit a complete application according to the instructions.

Completion Requirements

- **Coursework.** Students must complete **3.0 to 5.0 full-course equivalents (FCEs)** depending on the student's relevant background in the fields or areas of choice:
  - Most students entering with an MA take the equivalent of 4.0 FCEs to satisfy program requirements; students must take a minimum of 3.0 FCEs with the department after entering the PhD program.
  - Graduate courses taken at the MA level at the University of Toronto or elsewhere may be counted, with the department's permission, towards meeting some course requirements.
- Students will declare two fields:
  - **Field 1** will be one of Canadian Politics, Comparative Politics, Development Studies, International Relations, Political Theory, or Public Policy. The normal course requirement for Field 1 will be 2.0 FCEs, including a 1.0 FCE core course requirement.
  - **Field 2** will be one of Canadian Politics, Comparative Politics, Development Studies, International Relations, Political Theory, or Public Policy. The normal course requirement for Field 2 will be 1.5 FCEs, including a 1.0 FCE core course requirement.
- The Director of Graduate Studies may exercise discretion to waive the Field 2 requirement for students enrolled in collaborative specializations.
- Students who do not designate Political Theory as Field 1 must complete 0.5 graduate-level FCE in Political Theory.
- Students must complete 0.5 FCE in qualitative methods. This requirement may be waived on the basis of MA work.
- Students who do not designate Political Theory as Field 1 must complete 0.5 FCE in quantitative methods. This requirement may be waived on the basis of MA work. Students who designate Political Theory as Field 1 will substitute a non-waivable 0.5 FCE intensive reading requirement for the quantitative methods requirement.
- Students must complete POL2812Y *PhD Research Design*, normally during Year 3; students who have designated Political Theory as Field 1 are exempted.
- **Field examinations.**
  - Students must complete field examinations in Field 1 and Field 2 by the end of Year 2.
  - The Field 1 examination should be taken in May or August of the year in which the core course is taken as long as all assignments in the core course have been completed.
  - The Field 2 examination must be taken no later than Year 2.
  - A student who fails to achieve a grade of at least A– is permitted one opportunity to retake a field examination. After failing the examination once, the student is permitted two attempts to pass the examination in a new field.
- **Thesis proposal, thesis committee, and thesis schedule.** Students should assign a high priority to defining a thesis topic and choosing a thesis committee. By December of Year 3, students must have:
  - Established a thesis committee of three faculty members including a thesis supervisor and
  - Completed a draft of a thesis proposal of approximately 25 pages for submission to the thesis committee. Final revisions of the proposal must be approved by the end of Year 3. The research and writing of the thesis will follow the acceptance of the thesis proposal. The work schedule should permit the student to complete the thesis by the end of Year 5.
- **Language requirement.** Students must demonstrate competence in the language that is appropriate to the nature of the graduate work in which they are engaged. Students whose Field 1 is Canadian Politics are strongly encouraged to demonstrate competence in French.
- University policy requires that students complete all their non-thesis requirements (coursework, thesis proposal, Field 1 and Field 2 qualifying exams, and language requirements) by the end of Year 3.
- Students must achieve an A– average in coursework and an A– in their field examinations to remain in good standing.
- Minimum of three sessions in **residence**, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.
- Although the program has been designed for completion in four years, some students may require longer to complete all the requirements.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies.
- Applicants must also satisfy the Department of Political Science's additional admission requirements stated below.
- Exceptional students who have completed an appropriate bachelor's degree with a concentration in political science by the time of enrolment. Such students who receive less than an A– average in their first four courses will be recommended to SGS to transfer to the MA program. If the transfer is approved, these students will graduate with a terminal MA, provided their grades meet the requirements for the MA degree and provided they meet the course requirements of one of the three MA fields
- Applicants are expected to have achieved grades averaging A– or better in their most recent degree. Applicants from the BA level will apply to the MA program but indicate on the MA application that they wish to be considered for direct entry to the PhD program.
- Applicants must submit a complete application according to the instructions.

Completion Requirements

- **Coursework.** Students must complete **6.0 full-course equivalents (FCEs)** with at least an A– average in their first four courses in order to continue in the PhD program. In selecting courses, students should ensure that they satisfy the following field requirements.
- Students will declare two fields:
  - **Field 1** will be one of Canadian Politics, Comparative Politics, Development Studies, International Relations, Political Theory, or Public Policy. The normal course requirement for Field 1 will be 2.0 FCEs, including a 1.0 FCE core course requirement.
  - **Field 2** will be one of Canadian Politics, Comparative Politics, Development Studies, International Relations, Political Theory, or Public Policy. The normal course requirement for Field 2 will be 1.5 FCEs, including a 1.0 FCE core course requirement.
- The Director of Graduate Studies may exercise discretion to waive the Field 2 requirement for students enrolled in collaborative specializations.
- Students who do not designate Political Theory as Field 1 must complete 0.5 graduate-level FCE in Political Theory.
- Students must complete 0.5 FCE in qualitative methods. This requirement may be waived on the basis of MA work.
- Students who do not designate Political Theory as Field 1 must complete 0.5 FCE in quantitative methods. Students who designate Political Theory as Field 1 will substitute a non-waivable 0.5 FCE intensive reading requirement for the quantitative methods requirement.
- Students must complete POL2812Y *PhD Research Design*, normally during Year 4; students who have designated Political Theory as Field 1 are exempted.
- **Field examinations.**
  - Students must complete field examinations in Field 1 and Field 2 by the end of Year 2.
  - The Field 1 examination should be taken in May or August of the year in which the core course is taken as long as all assignments in the core course have been completed.
  - The Field 2 examination must be taken no later than Year 2. A student who fails to achieve a grade of at least A– is permitted one opportunity to retake a field examination. After failing the examination once, the student is permitted two attempts to pass the examination in a new field.
- **Thesis proposal, thesis committee, and thesis schedule.** Students should assign a high priority to defining a thesis topic and choosing a thesis committee. By December of Year 4, students must have:
  - Established a thesis committee of three faculty members including a thesis supervisor and
  - Completed a draft of a thesis proposal of approximately 25 pages for submission to the thesis committee. Final revisions of the proposal must be approved by the end of Year 4. The research and writing of the thesis will follow the acceptance of the thesis proposal. The work schedule should permit the student to complete the thesis by the end of Year 6.
- **Language requirement.** Students must demonstrate competence in the language that is appropriate to the nature of the graduate work in which they are engaged. Students whose Field 1 is Canadian Politics are strongly encouraged to demonstrate competence in French.
- University policy requires that students complete all their non-thesis requirements (coursework, thesis proposal, Field 1 and Field 2 qualifying exams, and language requirements) by the end of Year 4.
- Students must achieve an A– average in coursework and an A– in their field examinations to remain in good standing.
- Minimum of six sessions in **residence**, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.
- Although the program has been designed for completion in five years, some students may require longer to complete all the requirements.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Political Science: Political Science MA, PhD Courses

Some listed courses have an undergraduate component and begin the first week of the session. Not all courses are given every year. Consult the departmental timetable.

Canadian Politics

Course Code	Course Title
POL2100H	Issues and Foundations in Canadian Government (core)
POL2102H	Topics in Canadian Politics I
POL2103H	Topics in Canadian Politics II
POL2105H	Canadian and Comparative Political Development (core)
POL2128H	Federalism and Diversity in Canada (and Beyond)
POL2139H	The Canadian Welfare State in Comparative Perspective
POL2317H	Politics and Policy Analysis

Comparative Politics

Course Code	Course Title
POL2139H	The Canadian Welfare State in Comparative Perspective
POL2241H	Civil War and Counterinsurgency
POL2317H	Politics and Policy Analysis
JRA2321H	Topics in Comparative Politics
POL2321H	Topics in Comparative Politics I
POL2322H	Topics in Comparative Politics II
POL2326H	Democracy and Dictatorship
POL2335H	Business and Politics: Power in a Global World
POL2344H	Land and Indigenous Politics
POL2345H	Politics of Growth in Developing Countries
POL2355H	Twentieth Century Ukraine
POL2370H	Media and Politics
JRA2391H	Topics in Comparative Politics
POL2391H	Topics in Comparative Politics III
POL2392H	Topics in Comparative Politics IV
POL2394H	Innovation and Knowledge Transfer in City Regions
POL2411H	Topics in Asian Politics
POL2418H	Topics in Middle East Politics
JPF2430H	Conceptualizing Cities in a Global Context
JPF2431H	Global Cities — Core Issues and Challenges
POL2700H	Foundations and Approaches to Comparative Politics (core)
POL2701H	Comparative Institutional Politics: Governance, Parties, and Structures of State Power (core)
POL2702H	Constituent Power in Comparative Perspective: Identity, Contention, and Mobilization (core)
POL2780H	Political Science Workshop

Development Studies

Course Code	Course Title
POL2326H	Democracy and Dictatorship
POL2345H	Politics of Growth in Developing Countries
POL2400H	Theories and Issues — The Politics of Development (core)
POL2401H	Regions and Methods — Development Studies
POL2405H	Topics in Latin American Politics
POL2408H	Political Economy of International Development
POL2411H	Topics in Asian Politics
POL2418H	Topics in Middle East Politics
JPF2430H	Conceptualizing Cities in a Global Context
JPF2431H	Global Cities — Core Issues and Challenges
POL2431H	Dynamics of Political Change in Contemporary China

International Relations

Course Code	Course Title
JPJ2037H	International Trade Regulation
JPJ2046H	Law, Institutions, and Development
POL2200H	International Relations Field Seminar I (core)
POL2201H	International Relations Field Seminar II (core)
POL2205H	Topics in International Politics I
POL2206H	Topics in International Politics II
POL2207H	Topics in International Politics III
POL2212H	Human Rights, Politics, and International Relations
POL2213H	Global Environmental Politics
POL2216H	Military Instruments and Foreign Policy

Course Code	Course Title
POL2217H	The Military Instrument of Foreign Policy: Concepts and Approaches
POL2226H	Ethics and International Relations
POL2241H	Civil War and Counterinsurgency
POL2256H	Global Summit Governance and Diplomacy
POL2335H	Business and Politics: Power in a Global World
POL2780H	Political Science Workshop

Political Theory

Course Code	Course Title
POL2000H	Ancient Political Thought to the Rise of Modernity (core)
POL2001H	Theoretical Bases of Political Institutions
POL2002H	Modern and Contemporary Political Thought (core)
POL2011H	Problems in the Political Thought of the Socratic School
POL2019H	Moral Reason and Economic History
POL2024H	Feminist Theory
POL2026H	Topics in Political Thought I
POL2027H	Topics in Political Thought II
POL2028H	Approaches to Political Theory
POL2038H	Studies in Comparative Political Theory
JPR2051H	Fanaticism: A Political History
JPR2058H	Post-secular Political Thought: Religion, Radicalism, and the Limits of Liberalism
POL2075H	Post-Modern and Contemporary Thought
POL2080H	Political Theory Workshop
POL2226H	Ethics and International Relations
POL2344H	Land and Indigenous Politics
RLG3622H	Maimonides and His Modern Interpreters

Public Policy

Course Code	Course Title
POL2213H	Global Environmental Politics
POL2317H	Politics and Policy Analysis
POL2318H	Public Policy: Theories and Approaches (core)
POL2319H	Public Policy: Applications (core)
POL2335H	Business and Politics: Power in a Global World
POL2376H	Topics in Public Policy

Methods and Research Seminars

Course Code	Course Title
POL2503H	Thinking Through Research Design
POL2504H	Statistics for Political Scientists
POL2505H	Qualitative Methods in Political Research
POL2507H	Multiple Regression Analysis for Political Scientists
POL2519H	Quantitative Methods and Data Analysis
POL2578H	Topics in Methods
POL2809H	Politics and the Public Sphere: Academic Internship
POL2810Y	MA Research Seminar I
POL2811Y	MA Research Seminar II
POL2812Y	PhD Dissertation Proposal Seminar

Independent Study and Special Topics

Course Code	Course Title
POL2800H	Special Topics I
POL2801H	Special Topics II
POL2904Y	Reading course in an approved special field
POL2905H	Reading course in an approved special field

Psychological Clinical Science

Psychological Clinical Science: Introduction

Faculty Affiliation

University of Toronto Scarborough (UTSC)

Degree Programs

Counselling and Clinical Psychology

MA and PhD

- Fields:
  - Clinical Psychology — offered by the Graduate Department of Psychological Clinical Science, UTSC;
  - Clinical and Counselling Psychology — offered by the Department of Applied Psychology and Human Development, Ontario Institute for Studies in Education (OISE), St. George campus

Collaborative Specializations

The following collaborative specialization is available to students in participating degree programs as listed below:

- **Addiction Studies**
  - Counselling and Clinical Psychology (Clinical Psychology field), MA, PhD

Overview

The Graduate Department of Psychological Clinical Science (UTSC) and the Department of Applied Psychology and Human Development (OISE) offer a graduate program in Counselling and Clinical Psychology leading to the MA and PhD degrees.

Contact and Address

Web: www.utsc.utoronto.ca/psych/clinical-psychology
Email: clinicalpsych.utsc@utoronto.ca
Telephone: (416) 287-7131

Graduate Department of Psychological Clinical Science
University of Toronto Scarborough (UTSC)
Science Wing, Room SW427D
1265 Military Trail
Toronto, Ontario M1C 1A4
Canada

Psychological Clinical Science: Graduate Faculty

Full Members

Bagby, Michael - BA, MA, PhD, PhD
Goghari, Vina - BA, MA, PhD
Ruocco, Anthony Charles - BS, MSc, PhD ***(Graduate Chair)***
Segal, Zindel - BA, MA, PhD
Uliaszek, Amanda Ann - BA, MA, PhD ***(Program Coordinator)***
Zakzanis, Konstantine - BA, MA, PhD

Associate Members

Cohn, Melanie - BA, MA, PhD
Cooper, Andrew Astley - BSc, MA, PhD
Dere, Jessica - BA, MPsy, PhD
Ford, Brett Quaid - MA, PhD
Fournier, Marc - BA, PhD
Gerritsen, Cory - BSc, MA, PhD
Green, Robin - PhD
Inzlicht, Michael - BSc, MSc, PhD
Kidd, Sean - PhD
Kolla, Nathan - BA, MA, MD, PhD
Lee, Andy C.H. - BA, PhD
Penney, Stephanie - BA, MA, DPhil
Quilty, Lena - BSc, PhD
Rabin, Jenny - PhD
Ramirez, Joel - BPT, MHSc, PhD
Rector, Neil - BA, MA, PhD
Rosenblat, Joshua - BSc, MD
Sabiston, Catherine - BS, MA, PhD
Schmuckler, Mark - BA, PhD
Sloan, Matthew - MSc, MD

Psychological Clinical Science: Counselling and Clinical Psychology MA; Field: Clinical Psychology

The **Counselling and Clinical Psychology program** offers studies leading to the MA and PhD degrees. It is offered by the Graduate Department of Psychological Clinical Science at the University of Toronto Scarborough (UTSC) and the Graduate Department of Applied Psychology and Human Development at the Ontario Institute for Studies in Education (OISE), St. George campus.

This graduate program is intended for students seeking to pursue careers in research, teaching, and clinical practice. At the time of application, students will be required to identify a preference for a specific field as well as for a potential supervisor with whom they would work if admitted to the program.

The program has two fields:

- Clinical and Counselling Psychology, offered by OISE;
- Clinical Psychology, offered by UTSC.

The field in Clinical Psychology is offered by the Department of Psychological Clinical Science at UTSC. Clinical Psychology at UTSC adheres to a Clinical Science model of training and is accredited by the Canadian Psychological Association (CPA). The primary and overriding objective of graduate training in Clinical Psychology at UTSC is to foster exceptional clinical scientists according to the highest standards of research and professional practice.

Graduate training in Clinical Psychology at UTSC has primary research strengths in the areas of: clinical and cognitive neuroscience, psychological assessment and clinical neuropsychology, psychopathology, personality, and mindfulness- and acceptance-based psychotherapies.

The field in Clinical Psychology adheres to a generalist model of training, with a primary focus on adults, including emerging adults and older adults. A unifying theme of faculty research in Clinical Psychology at UTSC is to advance knowledge of the etiology and assessment and treatment of mental disorders. Instruction is provided in psychopathology, assessment, and intervention, and students are trained to practise with a variety of adult populations. The field also boasts strength in neuropsychology.

The full-time, two-year MA program is designed for applicants interested in working as researchers or practitioners in a variety of psychological and academic settings. This program enables students to apply for registration with the College of Psychologists of Ontario (CPO) as a Psychological Associate. It also meets the needs of students who plan to apply to the PhD program in Counselling and Clinical Psychology.

MA Program; Field: Clinical Psychology

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Psychological Clinical Science's additional admission requirements stated below.
- A four-year bachelor's degree from a recognized university with at least an A– (or first-class standing) in the final two years of undergraduate study, and at least 4.0 to 6.0 full-course equivalents (FCEs) in psychology including statistics and some laboratory research experience. Students who are admitted to the program without 4.0 to 6.0 FCEs in required undergraduate coursework may be required to complete additional courses in the master's program. Applicants with a strong background in mathematics, computer science, statistics, biological science, or neuroscience are encouraged to apply.
- Two academic letters of reference.
- A personal statement.
- A curriculum vitae.
- Completion of the Department Application Form.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction is not English must demonstrate proficiency in English. Applicants must complete the Test of English as a Foreign Language (TOEFL), or its equivalent according to SGS regulations, prior to submitting the application. See General Regulations section 4.3 for requirements.

Completion Requirements

- **Coursework.** The Clinical Psychology field for the MA in Counselling and Clinical Psychology requires **5.0 full-course equivalents (FCEs)**, including an ethics course, practicum-based courses, a clinical practicum, and a thesis.
  - 4.5 FCEs as follows:
    - **Year 1:**
      - CPS1601H *Psychopathology*;
      - CPS1701H *Psychological Assessment I: Psychometric Theory and Psychodiagnostics*;
      - CPS1702H *Psychological Assessment II: Neuropsychological and Intellectual Assessment*;
      - CPS1801H *Psychotherapy*;
      - CPS1901H *Ethics*.
    - **Year 2:**
      - CPS1101H *Clinical Research Design*;
      - CPS1102H *Statistical Techniques I*;
      - CPS1802H *Applied Interventions in Clinical Psychology*;
      - CPS1803H *Practicum in Psychological Interventions*.
  - 0.5 FCE: Students must complete a clinical practicum at a pre-approved placement site in the final Summer of the program (CPS2999H *Summer Practicum*).
- **Research thesis** to be completed and orally defended in Year 2 of the program.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Psychological Clinical Science: Counselling and Clinical Psychology PhD; Field: Clinical Psychology

The **Counselling and Clinical Psychology program** offers studies leading to the MA and PhD degrees. It is offered by the Graduate Department of Psychological Clinical Science at the University of Toronto Scarborough (UTSC) and the Graduate Department of Applied Psychology and Human Development at the Ontario Institute for Studies in Education (OISE), St. George campus.

This graduate program is intended for students seeking to pursue careers in research, teaching, and clinical practice. At the time of application, students will be required to identify a preference for a specific field as well as for a potential supervisor with whom they would work if admitted to the program.

The program has two fields:
- Clinical and Counselling Psychology, offered by OISE;
- Clinical Psychology, offered by UTSC.

The **field in Clinical Psychology** is offered by the Graduate Department of Psychological Clinical Science at UTSC. Clinical Psychology adheres to a Clinical Science model of training and is accredited by the Canadian Psychological Association (CPA). The primary and overriding objective of graduate training is to foster exceptional clinical scientists according to the highest standards of research and professional practice. Graduate training in Clinical Psychology at UTSC has primary research strengths in the areas of: clinical and cognitive neuroscience, psychological assessment and clinical neuropsychology, psychopathology, personality, and mindfulness- and acceptance-based psychotherapies.

The field in Clinical Psychology adheres to a generalist model of training, with a primary focus on adults, including emerging adults and older adults. A unifying theme of faculty research in Clinical Psychology at UTSC is to advance knowledge of the etiology and assessment and treatment of mental disorders. Instruction is provided in psychopathology, assessment, and intervention, and students are trained to practise with a variety of adult populations. The field also boasts strength in neuropsychology.

The PhD program is designed for applicants interested in a career as a clinical psychologist based on a **Clinical Science** model of training. Graduate training in Clinical Psychology at UTSC prepares graduates primarily for research and clinical careers as clinical scientists in university and medical and psychological settings.

The field is distinguished by its innovative cross-disciplinary approach that emphasizes scientific innovation through novel research collaborations that push traditional boundaries in clinical psychology. Importantly, the program meets the needs of students who plan to engage in research, teaching, and/or evidence-based clinical practice. This program is intended to meet the registration requirements of the College of Psychologists of Ontario (CPO) at the doctoral level.

This field is offered on a full-time basis, and progress in the program will be reviewed annually.

PhD Program; Field: Clinical Psychology

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Psychological Clinical Science's additional admission requirements stated below.
- A master's degree in Clinical Psychology (or its equivalent) from a recognized university, with a minimum A– average and excellent research performance.
- Two academic letters of reference.
- A personal statement.
- A curriculum vitae.
- Completion of the Department Application Form.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction is not English must demonstrate proficiency in English. Applicants must complete the Test of English as a Foreign Language (TOEFL), or its equivalent according to SGS regulations, prior to submitting the application. See General Regulations section 4.3 for requirements.

Completion Requirements

- The PhD program requires **5.5 full-course equivalents (FCEs)** including coursework, three clinical placements, plus a comprehensive examination, thesis proposal, thesis, and thesis defence:
  - 3.5 FCEs in coursework, normally completed by the end of Year 3:
    - CPS1103H *Statistical Techniques II*;
    - CPS1201H *Human Neuropsychology*;
    - CPS1301H *Cognitive-Affective Bases of Behaviour*;
    - CPS1401H *Social and Interpersonal Bases of Behaviour*;
    - CPS2901H *Practicum in Clinical Supervision*;
    - CPS2902H *Quality Assurance and Consultation*;
    - CPS3901H *The Historical and Scientific Foundations of Psychology*.
  - 2.0 FCEs in clinical work:
    - 1.0 FCE in two separate part-time clinical placements during Years 1 and 2 (CPS3999H *Clinical Placement I* and CPS4999H *Clinical Placement II*).
    - 1.0 FCE in a one-year, full-time clinical internship at a Canadian Psychological Association- or American Psychological Association-accredited clinical setting (or equivalent), which normally takes place during Year 5 (CPS5999Y *Internship*). Eligibility for the clinical internship will be assessed by the Director of Clinical Training (DCT) prior to Year 4 of the program.
- The **comprehensive examination** requirement consists of two mandatory components:
  - An oral examination focused on clinical expertise (normally completed in the Fall session of Year 2); and
  - A research-focused grant proposal (normally completed in the Fall session of Year 2).
  - A pass on both components is required for a student to continue on to PhD candidacy. Students who fail the oral exam will have the opportunity to retake the exam. Students who fail the grant proposal will have the opportunity to revise and resubmit. Students who fail either or both component(s) on the second attempt should consult the School of Graduate Studies' Academic Appeals Policy. If after the appeals process and second attempts at either or both component(s) result in a failure, the student will no longer be eligible to continue in the PhD program. Guidelines on the comprehensive requirement can be found in the PCS Graduate Handbook (PDF).
- **Thesis proposal**, normally approved prior to the start of Year 3 of the program.
- **Completed thesis**.
- Successful **defence of the thesis** at the Final Oral Examination.
- For students interested in acquiring additional clinical hours, the PhD program provides the following optional courses: CPS6999H *Clinical Placement III* and CPS7999H *Clinical Placement IV*. Please note that optional courses for the PhD must be approved by the faculty supervisor, the DCT, and the Graduate Chair prior to course enrolment.

- Supervisors will have annual meetings with students to assess academic progress and to develop plans of study. The DCT will also hold formal annual meetings with students to assess clinical and professional progress.
- The program length is five years, which includes a pre-doctoral internship.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

Psychological Clinical Science: Counselling and Clinical Psychology MA, PhD; Field: Clinical Psychology Courses

Course Code	Course Title
CPS1101H	Clinical Research Design
CPS1102H	Statistical Techniques I
CPS1103H	Statistical Techniques II
CPS1201H	Human Neuropsychology
CPS1209H	Clinical Neuropsychology
CPS1301H	Cognitive-Affective Bases of Behaviour
CPS1401H	Social and Interpersonal Bases of Behaviour
CPS1501H	Personality
CPS1601H	Psychopathology
CPS1701H	Psychological Assessment I: Psychometric Theory and Psychodiagnostics
CPS1702H	Psychological Assessment II: Neuropsychological and Intellectual Assessment
CPS1801H	Psychotherapy
CPS1802H	Applied Interventions in Clinical Psychology
CPS1803H	Practicum in Psychological Interventions
CPS1809H	Clinical Psychopharmacology
CPS1810H	Advanced Psychotherapy
CPS1901H	Ethics
CPS2901H	Practicum in Clinical Supervision
CPS2902H	Quality Assurance and Consultation
CPS2999H	Summer Practicum
CPS3801H	Multi-Person Therapies
CPS3901H	The Historical and Scientific Foundations of Psychology
CPS3999H	Clinical Placement I
CPS4999H	Clinical Placement II
CPS5001H	Directed Readings
CPS5002H	Directed Readings
CPS5999Y	Internship
CPS6999H	Clinical Placement III
CPS7999H	Clinical Placement IV

Psychology

Psychology: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Psychology

MA and PhD

Note: admissions to the MA program have been administratively suspended.

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Addiction Studies**
  - Psychology, MA, PhD
- **Aging, Palliative and Supportive Care Across the Life Course**
  - Psychology, MA, PhD
- **Neuroscience**
  - Psychology, MA, PhD
- **Psychology, Psychiatry and Engineering**
  - Psychology, MA, PhD
- **Sexual Diversity Studies**
  - Psychology, MA, PhD
- **Women's Health**
  - Psychology, MA, PhD

Overview

Graduate training in Psychology stresses training in general experimental psychology. Areas of specialization include the following:

- Behavioural Neuroscience
- Perception, Cognition, and Cognitive Neuroscience
- Developmental
- Social and Personality.

Contact and Address

Web: www.psych.utoronto.ca/graduate
Email: psy.graduate@utoronto.ca
Telephone: (416) 978-3404

Graduate Program, Department of Psychology
University of Toronto
Sidney Smith Hall, 100 St. George Street, Room 4034
Toronto, Ontario M5S 3G3 Canada

Psychology: Graduate Faculty

Full Members

Addis, Donna Rose - PhD
Alain, Claude - BA, MA, PhD
Andersen, Judith - BSc, MA, PhD
Anderson, Nicole - BA, MA, PhD
Armstrong, Blair - BASc, MA, PhD
Arruda Carvalho, Maithe - BSc, MSc, PhD
Bagby, Michael - BA, MA, PhD, PhD
Barense, Morgan - BA, PhD
Barnett, Alexander - BS, MA, PhD
Bernhardt-Walther, Dirk - BSc, MPH, PhD
Bloom, Paul - BA, PhD
Buchsbaum, Bradley - BSc, PhD
Buchsbaum, Daphna - AB, MA, MSc, PhD
Campos, Jennifer - BA, PhD
Cant, Jonathan - BA, MS, MedScD
Carlson, Erika Nicole - BS, MA, MA, PhD
Chambers, Craig - BA, MA, MA, PhD
Chasteen, Alison - BA, PhD
Cheung, Felix - AB, AM, PhD
Chung, Joanne Mee Hae - BA, BA, MA, PhD
Cohn, Melanie - BA, MA, PhD
Corbit, Laura - PhD
Cree, George Scott - BA, MA, PhD
Cunningham, William - BA, MA, MPH, MS, PhD
Cupchik, Gerald Chaim - BA, MA, PhD
der Nederlanden, Christina M. Vanden Bosch - BA, MA, PhD
Dion, Karen - BA, PhD
Duncan, Katherine - BS, PhD
Dunkley, Benjamin - BSc, PhD
Einstein, Gillian - AB, PhD
Erb, Suzanne - BSc, MA, PhD
Farb, Norman - BA, MA, PhD
Ferber, Susanne - MPsy, PhD
Finn, Amy - BA, PhD
Fletcher, Paul - BSc, DPhil
Ford, Brett Quaid - MA, PhD
Fournier, Marc - BA, PhD
Fukuda, Keisuke - BS, MS, PhD
Galea, Liisa - BSc, AM
Gerlai, Robert - MSc, PhD
Gilboa, Asaf - BA, MA, PhD
Haley, David - BA, MA, PhD
Helwig, Charles - BA, PhD
Herrmann, Bjorn - PhD
Holmes, Melissa - BA, MA, PhD
Hutcherson, Cendri Anne Claire - BA, PhD
Impett, Emily - BS, MS, PhD
Inbar, Yoel - PhD
Inzlicht, Michael - BSc, MSc, PhD
Ito Lee, Rutsuko - BA, PhD
Johnson, Elizabeth - BA, MA, PhD ***(Graduate Director)***
Joordens, Steve - BA, MA, PhD
Josselyn, Sheena - MA, PhD
Kim, Junchul - BSc, MSc, PhD
Lee, Andy C.H. - BA, PhD
Lee, Spike - MS, PhD

Leonardelli, Geoffrey - BA, MA, PhD
Levine, Brian - BA, MA, PhD
Lockwood, Penelope - BA, MA, PhD
Mabbott, Donald - PhD
MacDonald, Geoff - BA, PhD
Mack, Meg Schlichting - BA, PhD
Mack, Michael - BCS, MSc, PhD
Malti, Tina - MA, MA, PhD, PhD
Martin, Loren - BSc, MSc, PhD
McAndrews, Mary Pat - BSc, MA, PhD
McIntosh, Anthony Randal - BSc, MSc, PhD
Meltzer, Jed - BSc, PhD
Monks, Ashley - BSc, MA, PhD
Moscovitch, Morris - BSc, MA, PhD, Dr. Max and Gianna Glassman Chair in Neuropsychology
Murphy, Kelly - BSc, MA, PhD
Neel, Rebecca - BA, MA, PhD
Nestor, Adrian - BPhil, MSc, ScD
Niemeier, Matthias - MA, PhD
Olsen, Rosanna - BS, PhD
Page-Gould, Elizabeth - BS, PhD, CRC ***(Graduate Chair)***
Park, Jun Young - PhD
Plaks, Jason - BA, MA, MPH, PhD
Pratt, Jay - BA, MS, PhD
Ralph, Martin - BSc, PhD
Ronfard, Samuel - BA, MEd, MSc(T), EdD
Rozeske, Robert Raymond - BA, MA, PhD
Rule, Nicholas - AB, MS, PhD, CRC
Ruocco, Anthony Charles - BS, MSc, PhD
Ryan, Jennifer - BS, PhD
Schertz, Jessamyn Leigh - BA, MS, PhD
Schimmack, Ulrich - BA, MA, DPhil
Schmuckler, Mark - BA, PhD
Schneider, Bruce - BA, PhD
Sekuler, Allison - BA, PhD
Sommerville, Jessica - PhD
Stellar, Jennifer - BA, PhD
Tafarodi, Romin - BA, PhD
Takehara, Kaori - BSc, MSc, PhD
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Associate Members

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Ryan, William - BA, PhD, PhD

Psychology: Psychology MA

The **Master of Arts (MA) program** is designed to provide students with rigorous scientific training in experimental psychology. The program is one year in duration, during which time students obtain instruction in statistics and research design, and carry out a research project that culminates in a written thesis and oral examination. Students admitted to the MA program are expected to continue to the PhD program.

MA Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Psychology's additional admission requirements stated below.
- Appropriate bachelor's degree from a recognized university with a minimum A– average (or first-class standing) in the last two undergraduate years, and the equivalent of 6.0 full-course equivalents (FCEs) in psychology including statistics and adequate research performance.
- It is assumed that all students entering the MA program intend to continue in the PhD program.

Completion Requirements

- Courses and individual research training leading to a thesis.
- **Coursework.** Students must successfully complete a total of **2.0 FCEs** as follows:
  - PSY1000H *Directed Studies*
  - PSY2001H *Statistics I*
  - two half-course Psychology electives (1.0 FCE total)
- **MA thesis.**

It is expected that following the MA year, students will proceed to the PhD program. To be eligible for admission, adequate research performance and at least an A– average are required.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

Psychology: Psychology PhD

The principal aim of the **Doctor of Philosophy (PhD)** program is to equip students with the skills to carry out advanced research within experimental psychology, and to become independent research scientists. Students work closely with a faculty adviser to develop and conduct a specialized (often multidisciplinary) program of research that ultimately culminates in a written dissertation and final oral examination. Through additional coursework and research opportunities, students gain breadth in their knowledge base and skill set in experimental psychology.

The program is designed to prepare students for careers in academia, or a variety of non-academic careers where rigorous and in-depth research training is required.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Psychology's additional admission requirements stated below.
- Appropriate University of Toronto master's degree, or its equivalent from a recognized university, with a minimum A– average and adequate research performance.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **3.0 full-course equivalents (FCEs)** as follows:
  - 0.5 FCE: an advanced statistics course chosen from a list provided by the department (typically PSY2002H *Statistics II*, taken in Year 1).
  - PSY3000H *External Research Project*, a research project course supervised by a faculty member other than the student's PhD supervisor, completed during Years 1 and 2.
  - PSY3001H *Professional Psychology*, taken in two modules in Years 1 and 3.
  - 1.0 FCE in Psychology course electives. Of this requirement, 0.5 FCE can be achieved through two 0.25 FCE Psychology module electives (PSY3100H *Psychological Science Skills*).
  - PSY4000H *Doctoral Research Project*, thesis proposal, and oral exam (examination in the student's area of research).
- **PhD thesis**.
- Students may take other courses, but it is expected that the requirements will be completed in the first two years of the PhD program. Students admitted with a master's degree from another university will normally be required to fulfil the PhD course requirements; however, exemptions may be granted by the Graduate Director of the Department of Psychology.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Psychology's additional admission requirements stated below.
- Appropriate University of Toronto bachelor's degree, or its equivalent from a recognized university, with a minimum A– average and adequate research performance.
- Applicants with a master's degree in Psychology or a cognate discipline will likely be admitted to the four-year PhD program, whereas students with a master's degree in an unrelated discipline will be admitted to the direct-entry PhD option. Such admission decisions will be made by the Graduate Director.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **5.0 full-course equivalents (FCEs)** as follows:
  - PSY1100H *Foundational Research Project*, a research project course supervised by the student's supervisor plus two other faculty members, completed during Years 1 and 2.
  - PSY2001H *Statistics I*, taken in Year 1.
  - 0.5 FCE: an advanced statistics course chosen from a list provided by the department (typically PSY2002H *Statistics II*, taken in Year 1).
  - PSY3000H *External Research Project*, a research project course supervised by a faculty member other than the student's PhD supervisor, completed during Years 2 and 3.
  - PSY3001H *Professional Psychology*, taken in two modules in Years 1 and 3.
  - 2.0 FCEs in Psychology course electives. Of this requirement, 0.5 FCE can be achieved through two 0.25 FCE Psychology module electives (PSY3100H *Psychological Science Skills*).
  - PSY4000H *Doctoral Research Project*, thesis proposal, and oral exam (examination in the student's area of research).
- **PhD thesis**.
- Students may take other courses, but it is expected that the requirements will be completed in the first three years of the PhD program. Students admitted with a master's degree from another university will normally be required to fulfil the PhD course requirements; however, exemptions may be granted by the Graduate Director of the Department of Psychology.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Psychology: Psychology MA, PhD Courses

Not all courses are offered each year. See the current offerings.

MA and PhD Core Courses

Course Code	Course Title
PSY1000H	Directed Studies
PSY1100H	Foundational Research Project

Course Code	Course Title
PSY1200H	Selected Topics in Psychology
PSY1210H	Selected Topics in Psychology
PSY1500H	Conceptual Bases of Psychology
PSY2001H	Statistics I
PSY2002H	Statistics II
PSY3000H	External Research Project
PSY3001H	Professional Psychology
PSY3100H	Psychological Science Skills
PSY4000H	Doctoral Research Project

Behavioural Neuroscience Core Courses

Course Code	Course Title
PSY5101H	Mechanisms of Behaviour
PSY5110H	Advanced Topics in Behavioural Neuroscience I
PSY5111H	Advanced Topics in Behavioural Neuroscience II
PSY5112H	Advanced Topics in Behavioural Neuroscience III
PSY5121H	Advanced Topics in Animal Behaviour and Motivation II
PSY5130H	Advanced Topics in Neuropsychology I

Developmental Core Courses

Course Code	Course Title
PSY5303H	Cognitive Development
PSY5304H	Language Development
PSY5305H	Social Development
PSY5310H	Advanced Topics in Development I
PSY5311H	Advanced Topics in Development II

Perception/Cognition/Cognitive Neuroscience Core Courses

Course Code	Course Title
PSY5201H	Audition
PSY5203H	Higher Cognition
PSY5204H	Attention
PSY5205H	Memory
PSY5210H	Advanced Topics in Perception I
PSY5211H	Advanced Topics in Perception II
PSY5212H	Advanced Topics in Perception III
PSY5220H	Advanced Topics in Cognition I
PSY5221H	Advanced Topics in Cognition II
PSY5222H	Advanced Topics in Cognition III

Social and Personality Core Courses

Course Code	Course Title
PSY5402H	Personality
PSY5403H	Social Cognition
PSY5410H	Advanced Topics in Abnormal I
PSY5411H	Advanced Topics in Abnormal II
PSY5420H	Advanced Topics in Personality I
PSY5421H	Advanced Topics in Personality II
PSY5430H	Advanced Topics in Social Psychology I
PSY5431H	Advanced Topics in Social Psychology II
PSY5432H	Advanced Topics in Social Psychology III
PSY5433H	Advanced Topics in Social Psychology IV

Cross-Listed Courses

Course Code	Course Title
JLP2450H	Psycholinguistics
JLP2451H	Language Acquisition
JLP2452H	Language Acquisition and Linguistic Theory
JNS1000Y	Fundamentals of Neuroscience: Systems and Behaviour
JPX1001Y	Parenting: Multidisciplinary Perspectives
PCL3100H	Behavioural Pharmacology I
PCL3101H	Behavioural Pharmacology II

Public Health Sciences

Public Health Sciences: Introduction

Faculty Affiliation

Public Health

Degree Programs

Public Health Sciences

MPH

- Fields:
  - Black Health;
  - Epidemiology;
  - Family and Community Medicine;
  - Indigenous Health;
  - Nutrition and Dietetics
    - Emphases:
      - Clinical Nutrition;
      - Management and Food Systems;
      - Public Health Nutrition
  - Occupational and Environmental Health
    - Emphases:
      - Occupational Hygiene;
      - Environmental Public Health
  - Social and Behavioural Health Sciences

MSc

- Field:
  - Biostatistics
    - Emphasis: Artificial Intelligence and Data Science

DrPH

PhD

- Fields:
  - Biostatistics;
  - Epidemiology
    - Emphasis: Artificial Intelligence and Data Science
  - Occupational and Environmental Health;
  - Social and Behavioural Health Sciences

Bioethics

MHSc

Community Health

MScCH

- Fields:
  - Addictions and Mental Health;
  - Family and Community Medicine;
  - Health Practitioner Teacher Education;
  - Occupational Health Care;
  - Wound Prevention and Care

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Addiction Studies**
  - Public Health Sciences, MPH, MSc, PhD
- **Aging, Palliative and Supportive Care Across the Life Course**
  - Public Health Sciences, MPH, MSc, PhD
- **Bioethics** (admissions have been administratively suspended)
  - Public Health Sciences, MPH, MSc, PhD
- **Community Development** (admissions have been administratively suspended)
  - Public Health Sciences, MPH
- **Development Policy and Power**
  - Public Health Sciences, MPH
- **Environment and Health**
  - Community Health, MScCH
  - Public Health Sciences, MPH, PhD
- **Food Studies**
  - Public Health Sciences, PhD
- **Global Health (U of T Global Scholar)**
  - Public Health Sciences, MPH, MSc (thesis only), MScCH, PhD
- **Health Services and Policy Research** (admissions have been administratively suspended)
  - Public Health Sciences, PhD
- **Neuroscience**
  - Bioethics, MHSc
  - Community Health, MScCH
  - Public Health Sciences, MPH, MSc, PhD
- **Public Health Policy** (admissions have been administratively suspended)
  - Public Health Sciences, MPH, MSc, PhD
- **Resuscitation Sciences** (admissions have been administratively suspended)
  - Community Health, MScCH
  - Public Health Sciences, MPH, MSc, PhD
- **Sexual Diversity Studies**
  - Public Health Sciences, MPH, MSc, PhD
- **Women and Gender Studies**
  - Public Health Sciences, MPH, PhD
- **Women's Health**
  - Public Health Sciences, MPH, PhD

Overview

The Dalla Lana School of Public Health is an internationally recognized community of researchers, teachers, students, practitioners, policy makers, and citizens creating new knowledge, educating change makers, advancing practice, and guiding the way to better, more equitable outcomes in population health and health systems — locally, nationally, and globally.

The Graduate Department of Public Health Sciences in the Dalla Lana School of Public Health enrols almost 500 graduate students in its master's and doctoral degree programs.

In addition, the school has more than 40 postgraduate students in its two Royal College Residency programs: Public Health and Preventive Medicine and Occupational Medicine. The school is also engaged in teaching at the undergraduate level in the Faculty of Medicine, Faculty of Arts and Science, Bloomberg Faculty of Nursing, and University of Toronto Scarborough (UTSC).

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Sharma, Divya - BE, MTech, PhD
Sheppard, Amanda Joan - BSc, MHSc, DPhil
Shestopaloff, Konstantin - BSc, MSc, PhD
Shield, Kevin - MHSc, BMedSc, PhD
Sicchia, Suzanne - AB, MHSc, PhD
Singla, Daisy - PhD
Sirianni, Giovanna - BSc, DrMed
Smith, Brendan - BSc, MSc, PhD
Smith, Maureen - MEd
Smith, Maxwell James - BA, MSc, PhD
Sornpaisarn, Bundit - MA, MD, PhD
Spilchuk, Vincent - MSc, MD
Spithoff, Sheryl - BSc, MD
Sritharan, Jeavana - BHSc(PT), PhD
Steiner, Robert - BA, MBA
Summerbell, Richard - BSc, MSc, PhD
Sutradhar, Rinku - BSc, MMath, PhD
Sykes, Jenna R. - BM, MMath
Szego, Michael - BSc, MHSc, PhD
Tarasoff, Lesley Ann - PhD
Thompson, Aaron - BSc, MPH, MD
Thorpe, Kevin - MMath
Till, Christine - BSc, MA, PhD
Timothy, Roberta - AB, AM, MEd, PhD
Tsuchiya, Kazumi Jennifer - MPH, PhD
Tuite, Ashleigh - BS, BSc, MPH, MPH, MS, MSc, PhD, PhD
Turner, Nigel - BA, MA, PhD
Urch, Bruce - DIH, BSc, MSc, PhD
Vahid Shahidi, Faraz - BSc, MPH, PhD
van Lettow, Monique - BSc, MPH, PhD
Vanderlinden, Loren - BSc, MA, PhD
Waldron, Ingrid - BA, MA, PhD
Walker, Meghan Jane - BSc, MSc, PhD
Wang, Lisa - BEng, MSc
Wang, Peter - MPH, MD, PhD
Wells, Samantha - BA, MA, PhD
Wickens, Christine - BSc, MA, PhD

Williams, Constance - BSc, MD, PhD
Wilson, Sarah - BSc, MSc, MD
Wong, Thomas - BSc, MD
Woodruff, Sarah - BPHE, MSc, PhD
Wright, Alexandra Madeline - PhD
Yarmoshuk, Aaron - BA, MSc, PhD
Young, Jesse T. - PhD
Yu, Catherine - MD, MHSc
Yuen, Sheila - BSc, MD, MSc
Zakaria, Nur Camellia - BSc, PhD
Zakus, David - BSc, MES, MSc, PhD
Zhao, Junqiang - PhD

Public Health Sciences: Public Health Sciences MPH

The **Master of Public Health (MPH) degree** is designed to prepare the next generation of public health professionals and is aimed at students interested in professional and/or research careers in the community, academic, public, or private sectors. Applicants apply and may be admitted to one of the following fields:

- Black Health
- Epidemiology
- Family and Community Medicine
- Indigenous Health
- Nutrition and Dietetics
- Occupational and Environmental Health
- Social and Behavioural Health Sciences

The program may be taken on a full-time or part-time basis. The start date of all the fields is September each year except for the Indigenous Health field, which starts in May.

Public Health Sciences: Public Health Sciences MPH; Field: Black Health

MPH Program; Field: Black Health

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Dalla Lana School's additional admission requirements stated below.
- Appropriate bachelor's degree from a recognized university with a minimum mid-B average in the final year.
- At least one course in undergraduate statistics with a minimum B grade.
- Relevant work or volunteer experience.

Completion Requirements

- Completion of **10.0 full-course equivalents (FCEs)** as follows:
  - Core course: CHL5004H *Introduction to Public Health Sciences*.
  - Research methods: CHL5220H *Introduction to Quantitative Research* **or** CHL5401H *Epidemiologic Methods I*.
  - CHL5103H *Health Promotion 1* **or** CHL5105H *Social Determinants of Health*.
  - CHL5107H *Introduction to Qualitative Research*.
  - CHL5300H *Public Health Policy*.
  - CHL5820H *African/Black Health I: Sociohistorical Overview of Black Health*.
  - CHL5821H *African/Black Health II: Chronic Diseases; Sexual and Reproductive Health: Across the Lifespan*.
  - CHL5822H: *Decolonizing Theory and Methods in African/Black Health Research*.
  - CHL5823H: *African/Black Practicum Preparation*.
  - CHL5824H *Transnational Black Health Policy and Practice*.
  - CHL5825H *Black Resistance and Health: Interventions and Social Change*.
  - Minimum 1.0 FCE: CHL6010Y *Required MPH Practicum*.
  - Elective courses.
  - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis.

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW); 12 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Public Health Sciences: Public Health Sciences MPH; Field: Epidemiology

MPH Program; Field: Epidemiology

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Dalla Lana School's additional admission requirements stated below.
- Appropriate bachelor's degree from a recognized university with a minimum mid-B average in the final year.
- At least one course in undergraduate statistics.
- Relevant work or volunteer experience.

Completion Requirements

- Completion of **10.0 full-course equivalents (FCEs)** as follows:
  - Core course: CHL5004H *Introduction to Public Health Sciences*.
  - CHL5400H *MPH Professional Development Seminar Series*.
  - Research methods: CHL5401H *Epidemiologic Methods I* **and** CHL5402H *Epidemiologic Methods II*.

- Biostatistics: CHL5201H *Biostatistics I* **and** CHL5202H *Biostatistics II*.
- Epidemiology: CHL5405H *Health Trends and Surveillance*, CHL5418H *Scientific Overview in Epidemiology*, **and** CHL5426H *Population Perspectives for Epidemiology*.
- Public health policy: CHL5300H *Public Health Policy*.
- Minimum 1.0 FCE: CHL6010Y *Required MPH Practicum*.
- Elective courses.
- Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis.

- Full-time students normally require longer to complete the program, including time spent in the practicum placement.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F); 12 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Public Health Sciences: Public Health Sciences MPH; Field: Family and Community Medicine

MPH Program; Field: Family and Community Medicine

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Dalla Lana School's additional admission requirements stated below.
- Appropriate bachelor's degree from a recognized university with a minimum mid-B average in the final year.
- At least one course in undergraduate statistics.
- Relevant work or volunteer experience.

Completion Requirements

- Completion of **10.0 full-course equivalents (FCEs)** as follows:
  - Core course: CHL5004H *Introduction to Public Health Sciences*.
  - CHL5601H *Appraising and Applying Evidence to Assist Clinical Decision-Making*.
  - CHL5603Y *Social, Political, and Scientific Issues in Family Medicine*.
  - CHL5605H *Research Issues in Family Medicine/Primary Care* or an equivalent research course, subject to approval.
  - CHL5607H *Teaching and Learning by the Health Professions: Principles and Theories*.
  - CHL5608H *Teaching and Learning by the Health Professions: Practical Issues and Approaches*.
  - CHL5613H *Leading Improvement in the Quality of Health Care for Community Populations*.
  - CHL5622H *Patient-Related Health Care and Public Policy in Canada*.
  - Minimum 1.0 FCE: CHL5620Y *Practicum in Family Community Medicine*.
  - Elective courses.
  - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis.
- Full-time students normally require longer to complete the program, including time spent in the practicum placement.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F); 12 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MPH Program; Field: Family and Community Medicine (Advanced-Standing Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Dalla Lana School's additional admission requirements stated below.
- Appropriate bachelor's degree from a recognized university with a minimum mid-B average in the final year.
- Completion in good standing of the public health curriculum of an accredited Canadian medical school and/or meeting the required examinable competencies of the Medical Council of Canada.

Completion Requirements

- Completion of **5.0 full-course equivalents (FCEs)** as follows:
  - Core course: CHL5004H *Introduction to Public Health Sciences*.
  - Core course: CHL5603Y *Social, Political, and Scientific Issues in Family Medicine*.
  - Core course: CHL5622H *Patient-Related Health Care and Public Policy in Canada*.
  - Core course: CHL5624H *Historical, Ethical, and Philosophical Foundations of Public Health*.
  - 0.5 FCE research methods course selected from the following list:
    - CHL5601H *Appraising and Applying Evidence to Assist Clinical Decision-Making*.
    - CHL5605H *Research Issues in Family Medicine/Primary Care*.
    - CHL5613H *Leading Improvement in the Quality of Health Care for Community Populations*.
    - CHL5616H *Applied Survey Methods for Health Care Professionals*.
  - CHL6013H *Required MPH Advanced Standing Practicum*.
  - 1.5 FCEs in elective courses.

- Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis. See the CR/NCR-eligible courses in the course list section.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Public Health Sciences: Public Health Sciences MPH; Field: Indigenous Health

MPH Program; Field: Indigenous Health

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Dalla Lana School's additional admission requirements stated below.
- Appropriate bachelor's degree from a recognized university with a minimum mid-B average in the final year.
- At least one course in undergraduate statistics with a minimum grade of B.
- Relevant lived, work, or volunteer experience.

Completion Requirements

- Completion of **10.0 full-course equivalents (FCEs)** as follows:
  - Core course: CHL5004H *Introduction to Public Health Sciences*.
  - 1.0 FCE in research methods:
    - CHL5107H *Introduction to Qualitative Research* **or** CHL5526H *Indigenous Qualitative Methods* **and**
    - CHL5220H *Introduction to Quantitative Research* or approved equivalents.
  - CHL5103H *Health Promotion 1*.
  - CHL5520H *Indigenous Health*.
  - CHL5521H *Indigenous Practicum Preparation*.
  - CHL5522H *Indigenous Food Systems, Environment, and Health*.
  - CHL5523H *Indigenous Health and Social Policy*.
  - CHL5524H *Indigenous Health Theory and Methods*.
  - CHL5525H *Indigenous Social Determinants of Health in Canada*.
  - Minimum 1.0 FCE: CHL6010Y *Required MPH Practicum*.
  - Elective courses.
  - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis.

Mode of Delivery: In person
Program Length: 5 sessions full-time (typical registration sequence: S-FWS-F); 12 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Public Health Sciences: Public Health Sciences MPH; Field: Nutrition and Dietetics

MPH Program; Field: Nutrition and Dietetics

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Dalla Lana School's additional admission requirements stated below and may be considered for the advanced-standing option.
- Appropriate bachelor's degree in food and nutrition (or equivalent) from a recognized university with a minimum mid-B average in the final year.
- At least one course in undergraduate statistics.
- Relevant work or volunteer experience.

Completion Requirements

- Completion of **10.0 full-course equivalents (FCEs)** as follows:
  - Core course: CHL5004H *Introduction to Public Health Sciences*.
  - CHL5107H *Introduction to Qualitative Research*.
  - CHL5300H *Public Health Policy*.
  - Quantitative research methods: CHL5220H *Introduction to Quantitative Research* or an approved equivalent.
  - CHL5654H *Nutrition Programs and Strategies*.
  - Foundations of practice for students who have not completed dietetic practical training (dietetic internship): CHL5650H, CHL5651H, CHL5652H, and CHL5656Y.
  - 0.5 FCE in nutrition science: students choose either NFS1220H *Clinical Nutrition* or NFS1484H *Advanced Nutrition*; or students can propose another course to meet this requirement, to be approved by the Program Director.
  - Minimum 1.0 FCE: CHL6010Y *Required MPH Practicum*; 3.0 FCEs are required for students who wish to qualify for registration with a provincial regulatory body.
  - Elective courses.
  - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis.
- Full-time students normally require longer to complete the program, including time spent in the practicum placement.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F); 12 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MPH Program; Field: Nutrition and Dietetics (Advanced-Standing Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Dalla Lana School's additional admission requirements stated below and may be considered for the advanced-standing option.
- Appropriate bachelor's degree in food and nutrition (or equivalent) from a recognized university with a minimum mid-B average in the final year.
- Membership in a provincial dietetics regulatory body or equivalent in the home country. Those planning to practise in Canada must be eligible for membership in a provincial regulatory body of dietetics.
- Five years of professional work experience in clinical, community, administrative, or public health dietetics.
- At least one course in undergraduate statistics.

Completion Requirements

- Completion of **5.0 full-course equivalents (FCEs)** as follows:
  - CHL5004H *Introduction to Public Health Sciences*.
  - Public health policy: CHL5300H *Public Health Policy* or CHL5622H *Patient-Related Health Care and Public Policy in Canada*.
  - Research methods: CHL5107H *Introduction to Qualitative Research* and CHL5220H *Introduction to Quantitative Research*, or an approved equivalent.
  - 0.5 FCE in population or public health nutrition from the following list:
    - CHL5522H *Indigenous Food Systems, Environment, and Health*.
    - CHL5653H *Community Nutrition*.
    - CHL5654H *Nutrition Programs and Strategies*.
    - NFS1201H *Public Health Nutrition*.
    - NFS1212H *Regulation of Food, Composition, Health Claims, and Safety*.
    - Other courses approved by the Program Director.
  - 0.5 FCE in nutrition science from the following list:
    - NFS1220H *Clinical Nutrition*.
    - NFS1223H *Dietary Carbohydrate and Glycaemic Index in Health and Disease*.
    - NFS1484H *Advanced Nutrition*.
    - Other courses approved by the Program Director.
  - CHL6013H *Required MPH Advanced Standing Practicum*.
  - Elective courses.
  - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis. See the CR/NCR-eligible courses in the course list section.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 9 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Public Health Sciences: Public Health Sciences MPH; Field: Occupational and Environmental Health

MPH Program; Field: Occupational and Environmental Health

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Dalla Lana School's additional admission requirements stated below.
- Appropriate bachelor's degree from a recognized university with a minimum mid-B average in the final year.
- At least one course in undergraduate statistics.
- Relevant work or volunteer experience.

Completion Requirements

- Completion of **10.0 full-course equivalents (FCEs)** as follows:
  - Core course: CHL5004H *Introduction to Public Health Sciences*.
  - CHL5904H *Perspectives in Occupational and Environmental Health — Legal and Social Context*.
  - CHL5910H *Occupational and Environmental Hygiene I*.
  - CHL5912H *Occupational and Environmental Toxicology*.
  - Physical agents: CHL5907H *Radiological Health* **or** CHL5914H *Physical Agents I-Noise*.
  - Research methods: CHL5220H *Introduction to Quantitative Research* **or** CHL5401H *Epidemiologic Methods I*.
  - 3.0 FCEs in one of the emphases described below.
  - Up to 2.5 FCEs in approved courses related to Occupational and Environmental Health and the emphasis in Environmental Public Health or Occupational Hygiene selected in collaboration, and with the approval of, the Program Director.
  - Minimum 1.0 FCE: CHL6010Y *Required MPH Practicum*.
  - Elective courses.
  - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis.
- Full-time students may require longer to complete the program, including time spent in the practicum placement.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F); 12 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Public Health Sciences: Public Health Sciences MPH; Field: Social and Behavioural Health Sciences

MPH Program; Field: Social and Behavioural Health Sciences

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Dalla Lana School's additional admission requirements stated below.
- Appropriate bachelor's degree from a recognized university with a minimum mid-B average in the final year.
- At least one course in undergraduate statistics.
- Relevant work or volunteer experience.

Completion Requirements

- Completion of **10.0 full-course equivalents (FCEs)** as follows:
  - Core course: CHL5004H *Introduction to Public Health Sciences*.
  - CHL5103H *Health Promotion 1* **and** CHL5104H *Health Promotion 2*.
  - CHL5105H *Social Determinants of Health*.
  - CHL5110H *Theory and Practice of Program Evaluation*.
  - CHL5300H *Public Health Policy*.
  - Research methods: CHL5201H *Biostatistics I*, CHL5401H *Epidemiologic Methods I,* **and** CHL5107H *Introduction to Qualitative Research* or approved equivalents.
  - Minimum 1.0 FCE: CHL6010Y *Required MPH Practicum*.
  - Elective courses.
  - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis.
- Full-time students normally require longer to complete the program, including time spent in the practicum placement.

Mode of Delivery: In person
Program Length: 4 sessions full-time (typical registration sequence: FWS-F); 12 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Public Health Sciences: Public Health Sciences MSc

The **Master of Science (MSc) degree** is designed for students interested in research and academic careers involving the development and application of statistical methodology to further our understanding of data arising in the health sciences. The program is offered in the field of Biostatistics, both full-time and part-time.

Public Health Sciences: Public Health Sciences MSc; Field: Biostatistics

MSc Program; Field: Biostatistics (Coursework Plus Thesis Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Dalla Lana School of Public Health's additional admission requirements stated below.
- Appropriate bachelor's degree from a recognized university with a minimum mid-B average in the final year.

Completion Requirements

- Completion of 4.0 FCEs as follows:
  - CHL5004H *Introduction to Public Health Sciences*.
  - CHL5207Y *Laboratory in Statistical Design and Analysis*.
  - CHL5209H *Survival Analysis I*.
  - CHL5210H *Categorical Data Analysis*.
  - CHL5223H *Applied Bayesian Methods* **or** STA2212H *Mathematical Statistics II*.
  - CHL5226H *Mathematical Foundations of Biostatistics* **or** STA2112H *Mathematical Statistics I*.
  - CHL5250H *Special Topics in Biostatistics*.
  - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis.
- A thesis written under the supervision of a thesis committee. An oral defence of the thesis is required.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 9 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MSc Program; Field: Biostatistics (Coursework-Only Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Dalla Lana School of Public Health's additional admission requirements stated below.
- Appropriate bachelor's degree from a recognized university with a minimum mid-B average in the final year.

Completion Requirements

- Completion of 5.0 FCEs as follows:
  - CHL5004H *Introduction to Public Health Sciences*.
  - CHL5207Y *Laboratory in Statistical Design and Analysis*.
  - CHL5209H *Survival Analysis I*.
  - CHL5210H *Categorical Data Analysis*.
  - CHL5223H *Applied Bayesian Methods* **or** STA2212H *Mathematical Statistics II*.
  - CHL5226H *Mathematical Foundations of Biostatistics* **or** STA2112H *Mathematical Statistics I*.
  - CHL5250H *Special Topics in Biostatistics*.
  - 1.0 FCE in electives from an approved list of courses.
  - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis. See the CR/NCR-eligible courses in the course list section.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 9 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Public Health Sciences: Public Health Sciences DrPH

The **Doctor of Public Health (DrPH) program** advances public health education, addressing evaluation and translation of evidence in policy and practice decision-making contexts. The doctoral professional program is based on existing areas of faculty expertise within the Dalla Lana School of Public Health (including Public Health Sciences and the Institute of Health Policy, Management and Evaluation). Additionally, the program is the first of its kind in English Canada and will further raise the profile of the public health workforce.

The focus of the program is to contribute to emerging needs in public health to address increasingly complex issues. Graduates will develop skills and knowledge in four major competency areas, as defined by the Council on Education for Public Health: (1) Data & Analysis; (2) Leadership, Management, Governance; (3) Policy & Programs; and (4) Education & Workforce Development. The DrPH will allow graduates to take on advanced roles (e.g., leadership, knowledge translation) in public health policy and practice settings.

The program is offered on a full-time basis.

DrPH Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Dalla Lana School of Public Health's additional admission requirements stated below.
- Master's degree in a relevant public health sciences or health services-related discipline such as a Master of Public Health, Master of Science (with a health-related thesis), Master of Health Administration, or Master of Health Science with an average grade equivalent to a B+ or better.
- At least five years of mid-level management experience in a relevant field or organization.
- Candidates with less than five years of relevant experience may also be considered in exceptional circumstances.
- At least two letters of reference.

Completion Requirements

- **Coursework.** Completion of **6.0 full-course equivalents (FCEs)** as follows:
  - **Year 1** (3.5 FCEs):
    - CHL4001H *Contemporary Approaches to Population Health and Health Equity*
    - CHL4002H *Critical Appraisal and Use of Evidence*
    - CHL4003H *High Performance Leadership*
    - CHL4004H *Global Health Policy*
    - CHL4006H *Seminars in Public Health*
    - CHL5624H *Historical, Ethical, and Philosophical Foundations of Public Health*
    - 0.5 FCE: one research methods course
    - Applied Research Project
  - **Year 2** (2.5 FCEs):
    - CHL4005H *Governance and Financial Leadership*
    - CHL4007H *Public Health Advocacy* **or** HAD5778H *Comparative Health Systems and Policy* **or** approved equivalents
    - CHL5132H *Population Health Intervention Research (PHIR)*
    - 1.0 FCE: two elective courses
    - Written comprehensive examination in public health sciences
  - Attend a weeklong, in-person intensive session each academic session (Fall, Winter, Summer) in Years 1 to 3.
  - Write a **doctoral thesis** under the supervision of an approved thesis committee (supervisor with an appointment in Public Health Sciences plus two additional faculty members).
  - A **final oral defence** of the thesis before an examination committee approved by the School of Graduate Studies.
  - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis. See the CR/NCR-eligible courses in the course list section.

Mode of Delivery: Hybrid
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

Public Health Sciences: Public Health Sciences PhD

The **Doctor of Philosophy (PhD) program** prepares students for research and academic careers. Fieldwork and research enhance theoretical studies and expose students to the full breadth and depth of their public health science disciplines. Applicants apply and may be admitted to one of the following fields:

- Biostatistics
- Epidemiology
- Occupational and Environmental Health
- Social and Behavioural Health Sciences

The PhD program may be completed on a full-time or flexible-time basis.

With the approval of the graduate chair, some applicants may be admitted to a flexible-time PhD program. This program will benefit mature students with career obligations, and applicants must demonstrate that they are practising professionals. Degree requirements for the flexible-time program are identical to those for the full-time PhD program. Students are required to register full-time for the first four years of their program, after which they may register part-time. A plan of study and research activities will be negotiated at initial registration, to be reviewed and updated annually.

Public Health Sciences: Public Health Sciences PhD; Field: Biostatistics

PhD Program; Field: Biostatistics (Full-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Dalla Lana School's additional admission requirements stated below.
- Master's degree in a public health science-related discipline from a recognized university, with a minimum A– standing.
- Demonstrated educational and/or professional experience that indicates a capacity to undertake research-oriented doctoral studies.

Completion Requirements

- **Coursework.** Completion of **4.5 full-course equivalents (FCEs)** as follows:
  - CHL5208Y *Advanced Laboratory in Statistical Design and Analysis*.
  - CHL5209H *Survival Analysis I*.
  - CHL5210H *Categorical Data Analysis*.
  - CHL5250H *Special Topics in Biostatistics* (seminar).
  - CHL5260H *Doctoral Seminar Series in Biostatistics*.
  - STA2112H *Mathematical Statistics I* and STA2212H *Mathematical Statistics II*.
  - 0.5 FCE: elective course that relates to the student's area of study.
  - Students who have taken their MSc in the department may have taken some or all of these courses already. In this case, their program of study will be designed with consultation of the program director at the time of admission.
  - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis.
- Demonstrated proficiency in **statistics or research methods**.
- A written **qualifying examination** in biostatistics.
- A departmental defence of the **dissertation proposal**.
- Writing of a **PhD dissertation** under the supervision of an approved dissertation committee (supervisor plus two additional faculty members).
- A **departmental defence** of the dissertation prior to the SGS Final Oral Examination.
- A **final oral defence** of the dissertation before an examination committee approved by the School of Graduate Studies.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program; Field: Biostatistics (Flexible-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Dalla Lana School's additional admission requirements stated below.
- Master's degree in a public health science-related discipline from a recognized university, with a minimum A– standing.
- Demonstrated educational and/or professional experience that indicates a capacity to undertake research-oriented doctoral studies.

Completion Requirements

- **Coursework.** Completion of **4.5 full-course equivalents (FCEs)** as follows:
  - CHL5208Y *Advanced Laboratory in Statistical Design and Analysis*.
  - CHL5209H *Survival Analysis I*.
  - CHL5210H *Categorical Data Analysis*.
  - CHL5250H *Special Topics in Biostatistics* (seminar).
  - CHL5260H *Doctoral Seminar Series in Biostatistics*.
  - STA2112H *Mathematical Statistics I* and STA2212H *Mathematical Statistics II*.
  - 0.5 FCE: elective course that relates to the student's area of study.

    - Students who have taken their MSc in the department may have taken some or all of these courses already. In this case, their program of study will be designed with consultation of the program director at the time of admission.
    - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis. See the CR/NCR-eligible courses in the course list section.
- Demonstrated proficiency in **statistics or research methods**.
- A written **qualifying examination** in biostatistics.
- A departmental defence of the **dissertation proposal**.
- Writing of a **PhD dissertation** under the supervision of an approved dissertation committee (supervisor plus two additional faculty members).
- A **departmental defence** of the dissertation prior to the SGS Final Oral Examination.
- A **final oral defence** of the dissertation before an examination committee approved by the School of Graduate Studies.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

Public Health Sciences: Public Health Sciences PhD; Field: Epidemiology

PhD Program; Field: Epidemiology (Full-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Dalla Lana School's additional admission requirements stated below.
- Master's degree in a public health science-related discipline from a recognized university, with a minimum A– standing.
- Demonstrated educational and/or professional experience that indicates a capacity to undertake research-oriented doctoral studies.

Completion Requirements

- **Coursework.** Completion of **3.5 full-course equivalents (FCEs)** as follows:
    - CHL5404H *Research Methods I*.
    - CHL5406H *Quantitative Methods for Biomedical Research*.
    - CHL5408H *Research Methods II*.
    - CHL5423H *Doctoral Seminar in Epidemiology*.
    - CHL5424H *Advanced Quantitative Methods in Epidemiology*.
    - CHL5428H *Epidemiological Methods for Causal Mediation Analyses*.
    - 0.5 FCE: elective courses that relate to the student's area of study.
    - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis.
- Demonstrated proficiency in **statistics or research methods**.
- A written **qualifying examination** in epidemiology.
- A departmental defence of the **dissertation proposal**.
- Writing of a **PhD dissertation** under the supervision of an approved dissertation committee (supervisor plus two additional faculty members).
- A **departmental defence** of the dissertation prior to the SGS Final Oral Examination. On the recommendation of the supervisory committee and special approval from their departmental Graduate Chair or Coordinator, candidates have the opportunity to waive the departmental defence and proceed directly to the SGS Final Oral Exam.
- A **final oral defence** of the dissertation before an examination committee approved by the School of Graduate Studies.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program; Field: Epidemiology (Flexible-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Dalla Lana School's additional admission requirements stated below.
- Master's degree in a public health science-related discipline from a recognized university, with a minimum A– standing.
- Demonstrated educational and/or professional experience that indicates a capacity to undertake research-oriented doctoral studies.

Completion Requirements

- **Coursework.** Completion of **3.5 full-course equivalents (FCEs)** as follows:
    - CHL5404H *Research Methods I*.
    - CHL5406H *Quantitative Methods for Biomedical Research*.
    - CHL5408H *Research Methods II*.
    - CHL5423H *Doctoral Seminar in Epidemiology*.
    - CHL5424H *Advanced Quantitative Methods in Epidemiology*.
    - CHL5428H *Epidemiological Methods for Causal Mediation Analyses*.
    - 0.5 FCE: elective courses that relate to the student's area of study.
    - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis. See the CR/NCR-eligible courses in the course list section.

- Demonstrated proficiency in **statistics or research methods**.
- A written **qualifying examination** in epidemiology.
- A departmental defence of the **dissertation proposal**.
- Writing of a **PhD dissertation** under the supervision of an approved dissertation committee (supervisor plus two additional faculty members).
- A **departmental defence** of the dissertation prior to the SGS Final Oral Examination. On the recommendation of the supervisory committee and special approval from their departmental Graduate Chair or Coordinator, candidates have the opportunity to waive the departmental defence and proceed directly to the SGS Final Oral Exam.
- A **final oral defence** of the dissertation before an examination committee approved by the School of Graduate Studies.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

Public Health Sciences: Public Health Sciences PhD; Field: Occupational and Environmental Health

PhD Program; Field: Occupational and Environmental Health (Full-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Dalla Lana School of Public Health's additional admission requirements stated below.
- Master's degree in a public health science-related discipline from a recognized university, with a minimum A– standing.
- Demonstrated educational and/or professional experience that indicates a capacity to undertake research-oriented doctoral studies.

Completion Requirements

- **Coursework.** Completion of **3.0 full-course equivalents (FCEs)** as follows:
  - 0.5 FCE in either occupational or environmental health.
  - 1.0 FCE in appropriate advanced research methodology courses, including one (0.5 FCE) in biostatistics, as relevant to the area of study.
  - CHL5920H *Occupational and Environmental Health Doctoral Seminar Series*.
  - 1.0 FCE: elective courses that relate to the student's area of study.
  - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis.
- Demonstrated proficiency in **statistics or research methods**.
- A written **qualifying examination** in occupational and environmental health.
- A departmental defence of the **dissertation proposal**.
- Writing of a **PhD dissertation** under the supervision of an approved dissertation committee (supervisor plus two additional faculty members).
- A **departmental defence** of the dissertation prior to the SGS Final Oral Examination. On the recommendation of the supervisory committee and special approval from their departmental Graduate Chair or Coordinator, candidates have the opportunity to waive the departmental defence and proceed directly to the SGS Final Oral Exam.
- A **final oral defence** of the dissertation before an examination committee approved by the School of Graduate Studies.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program; Field: Occupational and Environmental Health (Flexible-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Dalla Lana School of Public Health's additional admission requirements stated below.
- Master's degree in a public health science-related discipline from a recognized university, with a minimum A– standing.
- Demonstrated educational and/or professional experience that indicates a capacity to undertake research-oriented doctoral studies.

Completion Requirements

- **Coursework.** Completion of **3.0 full-course equivalents (FCEs)** as follows:
  - 0.5 FCE in either occupational or environmental health.
  - 1.0 FCE in appropriate advanced research methodology courses, including one (0.5 FCE) in biostatistics, as relevant to the area of study.
  - CHL5920H *Occupational and Environmental Health Doctoral Seminar Series*.
  - 1.0 FCE: elective courses that relate to the student's area of study.
  - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis. See the CR/NCR-eligible courses in the course list section.
- Demonstrated proficiency in **statistics or research methods**.

- A written **qualifying examination** in occupational and environmental health.
- A departmental defence of the **dissertation proposal**.
- Writing of a **PhD dissertation** under the supervision of an approved dissertation committee (supervisor plus two additional faculty members).
- A **departmental defence** of the dissertation prior to the SGS Final Oral Examination. On the recommendation of the supervisory committee and special approval from their departmental Graduate Chair or Coordinator, candidates have the opportunity to waive the departmental defence and proceed directly to the SGS Final Oral Exam.
- A **final oral defence** of the dissertation before an examination committee approved by the School of Graduate Studies.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

Public Health Sciences: Public Health Sciences PhD; Field: Social and Behavioural Health Sciences

PhD Program; Field: Social and Behavioural Health Sciences (Full-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Dalla Lana School of Public Health's additional admission requirements stated below.
- Master's degree in a public health science-related discipline from a recognized university, with a minimum A– standing.
- Demonstrated educational and/or professional experience that indicates a capacity to undertake research-oriented doctoral studies.

Completion Requirements

- **Coursework.** Completion of **3.0 full-course equivalents (FCEs)** as follows:
  - CHL5101H *Social and Behavioural Theory and Health*.
  - CHL5102H *Social and Political Forces in Health*.
  - In consultation with their supervisor, students select 1.0 FCE in appropriate research methods courses relevant to their research area and educational need.
  - 1.0 FCE: elective courses that relate to the student's area of study.
  - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis.
- Demonstrated proficiency in **statistics or research methods**.
- A written **qualifying examination** in social and behavioural health sciences.
- A departmental defence of the **dissertation proposal**.
- Writing of a **PhD dissertation** under the supervision of an approved dissertation committee (supervisor plus two additional faculty members).
- A **departmental defence** of the dissertation prior to the SGS Final Oral Examination. On the recommendation of the supervisory committee and special approval from their departmental Graduate Chair or Coordinator, candidates have the opportunity to waive the departmental defence and proceed directly to the SGS Final Oral Exam.
- A **final oral defence** of the dissertation before an examination committee approved by the School of Graduate Studies.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program; Field: Social and Behavioural Health Sciences (Flexible-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Dalla Lana School of Public Health's additional admission requirements stated below.
- Master's degree in a public health science-related discipline from a recognized university, with a minimum A– standing.
- Demonstrated educational and/or professional experience that indicates a capacity to undertake research-oriented doctoral studies.

Completion Requirements

- **Coursework.** Completion of **3.0 full-course equivalents (FCEs)** as follows:
  - CHL5101H *Social and Behavioural Theory and Health*.
  - CHL5102H *Social and Political Forces in Health*.
  - In consultation with their supervisor, students select 1.0 FCE in appropriate research methods courses relevant to their research area and educational need.
  - 1.0 FCE: elective courses that relate to the student's area of study.
  - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis. See the CR/NCR-eligible courses in the course list section.
- Demonstrated proficiency in **statistics or research methods**.
- A written **qualifying examination** in social and behavioural health sciences.
- A departmental defence of the **dissertation proposal**.

- Writing of a **PhD dissertation** under the supervision of an approved dissertation committee (supervisor plus two additional faculty members).
- A **departmental defence** of the dissertation prior to the SGS Final Oral Examination. On the recommendation of the supervisory committee and special approval from their departmental Graduate Chair or Coordinator, candidates have the opportunity to waive the departmental defence and proceed directly to the SGS Final Oral Exam.
- A **final oral defence** of the dissertation before an examination committee approved by the School of Graduate Studies.

Mode of Delivery: In person
Program Length: 6 years full-time (typical registration sequence: Continuous)
Time Limit: 8 years full-time

Public Health Sciences: Bioethics MHSc

The **Master of Health Science (MHSc) in Bioethics** is a two-year, course-based, professional master's degree program. It is designed with a hybrid delivery model (i.e., both in-person and online learning components) and a modular format (i.e., courses offered every two to three weeks on specified days) to allow high-achieving professionals to earn a master's degree without interrupting their careers.

Students are expected to participate in in-person residencies on campus (normally a duration of five days) in each academic session. The in-person residencies are designed for immersive and social learning activities (e.g., developing and practising skills in applied bioethics) and for the in-person component of hybrid MHSc courses. Required core MHSc courses are designed as hybrid (i.e., roughly one-third of the course conducted in person and two-thirds online) or online courses with both synchronous and asynchronous elements. Most electives are also delivered using a hybrid or online modality.

The program's interactive, problem-based learning approach provides students with knowledge and skills that can be applied to a variety of health, health care, and health research contexts. Interaction with expert faculty and guest speakers, a practicum experience, and an independent capstone project in applied bioethics will help students bring theory and practice together to address real-world bioethics challenges. (Note: students interested in a research-stream program should consider the Collaborative Specialization in Bioethics.)

MHSc Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Dalla Lana School of Public Health's additional admission requirements stated below.
- Normally, an appropriate bachelor's degree, with a minimum B+ average in the final year, and a recognized professional degree in one of the health disciplines (e.g., MD, BScN, BScOT, BScPT, BSW) or equivalent. Applicants from other disciplines are considered on an individual basis.
- At least three years of relevant full-time professional work experience. Applicants with less experience may be considered in exceptional circumstances.
- The program favours individuals with outstanding academic credentials, demonstrated evidence of scholarly ability and personal maturity, and potential for significant bioethics leadership in the applicant's home institution, discipline, or local community upon completion of the MHSc in Bioethics.

Completion Requirements

- On-campus attendance at a weeklong, in-person **residency** each academic session (Fall, Winter, and Summer in Year 1; Fall and Winter in Year 2).
- Students must successfully complete a total of **7.0 full-course equivalents (FCEs)** as follows:
  - CHL3001H *Contemporary Issues in Bioethics*.*
  - CHL3003H *Empirical Approaches in Bioethics*.*
  - CHL3005H *Legal Approaches to Bioethics*.*
  - CHL3008Y *Practicum in Bioethics*.
  - CHL3011H *Theoretical Foundations of Bioethics I*.*
  - CHL3012H *Theoretical Foundations of Bioethics II*.*
  - CHL3050H *Professional Skills in Applied Bioethics Practice*.**
  - CHL3052Y *Capstone Project in Applied Bioethics*.
  - Elective courses (2.0 FCEs).

* Hybrid course: 8 hours during residency week plus 16 hours online.
** In-person course: all contact hours during residency weeks.

Mode of Delivery: Hybrid
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW)
Time Limit: 3 years full-time

Public Health Sciences: Community Health MScCH

The **Master of Science in Community Health (MScCH)** is an innovative program designed to meet the needs of experienced health professionals who wish to enhance their knowledge and skills in public health. It is intended for practising health professionals and/or individuals who can demonstrate significant experience in the health-care field. Five fields are offered:

- Addictions and Mental Health
- Family and Community Medicine
- Health Practitioner Teacher Education
- Occupational Health Care
- Wound Prevention and Care

The program may be taken on a full-time or part-time basis.

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also

satisfy the Dalla Lana School of Public Health's additional admission requirements stated below.
- A bachelor's degree from a recognized university in a public health specialty and/or one of the regulated health professions in Ontario with the equivalent of a minimum mid-B average in the final academic year.
- Relevant academic preparation and professional experience as a public health, community, or clinical practitioner.
- Some fields (i.e., Family and Community Medicine, Occupational Health Care, and Wound Prevention and Care) require appropriate certification/licensure in a regulated health profession and may require a valid license to practise in Canada or the student's home jurisdiction.

Completion Requirements

- The MScCH is a **coursework**-only program which requires the completion of **5.0 full-course equivalents (FCEs)** as follows:
  - CHL5004H *Introduction to Public Health Sciences*.
  - 0.5 to 1.0 FCE in supervised field placements or practica:
    - CHL5690H *MScCH Required Practicum*
    - another 0.5 FCE of practicum can be taken as an elective.
  - Normally 2.5 FCEs in field-specific required courses.
  - 1.0 to 1.5 FCEs in elective courses.
  - Students may elect to take up to 0.5 FCE on a Credit/No Credit (CR/NCR) basis. See the CR/NCR-eligible courses in the course list section.
- A diploma in Community Health may be awarded in exceptional circumstances to students who have completed 70% of the program requirements (at least 3.5 full-course equivalents (FCEs), including the required courses for the field, and with the approval of the department.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 9 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Public Health Sciences: Emphases

Artificial Intelligence and Data Science

Participating Programs:

- Public Health Sciences MSc; Field: Biostatistics

Students in the **Biostatistics (Coursework-Only) field** of study have the option to complete an emphasis by completing appropriate coursework in a given area. The emphasis requirements will also count toward their 5.0 full-course equivalent (FCE) field requirement.

- Students must complete **1.0 FCE** from the following list:
  - CHL5212H *Predictive Modelling in the Health Sciences*.
  - CHL5213H *Methods for Analysis of Microbiome Data*.
  - CHL5229H *Modern Biostatistics and Statistical Learning*.
  - CHL5230H *Applied Machine Learning for Health Data*.
  - CHL5231H *Statistical Foundations of Predictive Modeling in Biostatistics*.
  - Other course(s) approved by the Program Director.
- Students must complete a practical component in the area of Artificial Intelligence and Data Science through CHL5207Y *Laboratory in Statistical Design and Analysis*.

Artificial Intelligence and Data Science

Participating Programs:

- Public Health Sciences PhD; Field: Epidemiology

Students in the **Epidemiology field** of study have the option to complete an emphasis by completing appropriate coursework in a given area. The emphasis requirements will also count toward, but may exceed, the 4.0 full-course equivalent (FCE) field requirement.

- Students must complete **1.5 FCEs** from the following list:
  - CHL5212H *Predictive Modelling in the Health Sciences*
  - CHL5213H *Methods for Analysis of Microbiome Data*
  - CHL5229H *Modern Biostatistics and Statistical Learning*
  - CHL5230H *Applied Machine Learning for Health Data*
  - CHL5429H *Advanced Analytic Methods for Bias in Epidemiologic Studies*
  - CHL3020H *Ethics and Artificial Intelligence for Health*
  - HAD5306H *Introduction to Health Services Research and the Use of Health Administrative Data*
  - MHI2012H *Introduction to Big Data for Health: Foundations and Methodologies*
  - Other course(s) approved by the Program Director.

Clinical Nutrition

Participating Programs:

- Public Health Sciences MPH; Field: Nutrition and Dietetics

Students in the **Nutrition and Dietetics field of study** may complete an emphasis by completing **1.0 full-course equivalent (FCE)** in the given area. The emphasis requirements will also count toward their 10.0 FCE degree program requirements.

- 0.5 FCE: complete a four-week Clinical Nutrition practicum in a tertiary-care clinical nutrition setting, in addition to the standard practicum requirements for the field.
- 0.5 FCE from the following list:
  - NFS1220H *Clinical Nutrition*.

    - CHL5610H *Theory and Practice of Behaviour Change in Health Professional Settings*.
- A relevant research assignment for an appropriate agency focused on clinical nutrition as part of CHL5656Y *Nutrition and Dietetics Culminating Project*, to be approved by the program director or course instructor.

Environmental Public Health

Participating Programs:

- Public Health Sciences MPH; Field: Occupational and Environmental Health

Students in the **Occupational and Environmental Health field** of study must complete an emphasis by completing **3.0 full-course equivalents (FCEs)** in the given area. The emphasis requirements will also count toward their 10.0 FCE degree program requirements.

- CHL5201H *Biostatistics I*.
- CHL5413H *Public Health Sanitation*.
- CHL5416H *Environmental Epidemiology*.
- CHL5903H *Environmental Health*.
- CHL5921H *Protecting the Public from Air Pollution*.
- CHL5922H *Climate Change and Health*.

Management and Food Systems

Participating Programs:

- Public Health Sciences MPH; Field: Nutrition and Dietetics

Students in the **Nutrition and Dietetics field of study** may complete an emphasis by completing **1.0 full-course equivalent (FCE)** in the given area. The emphasis requirements will also count toward their 10.0 FCE degree program requirements.

- 0.5 FCE: complete a four-week Management and Food Systems practicum in a management and food provision setting, in addition to the standard practicum requirements for the field.
- 0.5 FCE: graduate-level course in management or food systems to be approved by the program director and course instructor.
- A relevant research assignment for an appropriate agency focused on management of food provision and food systems as part of CHL5656Y *Nutrition and Dietetics Culminating Project*, to be approved by the program director or course instructor.

Occupational Hygiene

Participating Programs:

- Public Health Sciences MPH; Field: Occupational and Environmental Health

Students in the **Occupational and Environmental Health field** of study must complete an emphasis by completing **3.0 full-course equivalents (FCEs)** in the given area. The emphasis requirements will also count toward their 10.0 FCE degree program requirements.

- CHL5410H *Occupational Epidemiology*.
- CHL5902H *Advanced Occupational Hygiene*.
- CHL5911H *Occupational and Environmental Hygiene II*.
- CHL5915H *Control of Occupational Hazards*.
- CHL5917H *Concepts in Safety Management*.
- CHL5918H *Biological Hazards in the Workplace and Community*.

Public Health Nutrition

Participating Programs:

- Public Health Sciences MPH; Field: Nutrition and Dietetics

Students in the **Nutrition and Dietetics field of study** may complete an emphasis by completing **1.0 full-course equivalent (FCE)** in the given area. The emphasis requirements will also count toward their 10.0 FCE degree program requirements.

- 0.5 FCE: complete a four-week Public Health Nutrition practicum in a regional, provincial, or federal public health agency setting, in addition to the standard practicum requirements for the field.
- NFS1201H *Public Health Nutrition*.
- A relevant research assignment for an appropriate agency focused on public health nutrition as part of CHL5656Y *Nutrition and Dietetics Culminating Project*, to be approved by the program director or course instructor.

Public Health Sciences: Public Health Sciences MPH, MSc, DrPh, PhD, Bioethics MHSc, Community Health MScCH Courses

Core Courses

Course Code	Course Title
CHL5004H	Introduction to Public Health Sciences
CHL5020H	Public Health Impact, Trust, and Communications

Students in the Master of Public Health, Master of Science, Master of Science in Community Health, Doctor of Philosophy, and Doctor of Public Health may elect to be assessed on a Credit/No Credit basis up to a total of 0.5 FCE.

Master of Health Science, Master of Public Health, Master of Science, Master of Science in Community Health, and Doctor of Philosophy Courses

Bioethics

Course Code	Course Title
CHL3001H	Contemporary Issues in Bioethics
CHL3003H	Empirical Approaches in Bioethics
CHL3005H	Legal Approaches in Bioethics
CHL3008Y	Applied Learning in Bioethics (Practicum)
CHL3011H	Theoretical Foundations of Bioethics I
CHL3012H	Theoretical Foundations of Bioethics II
CHL3020H	Ethics and Artificial Intelligence for Health
CHL3050H	Professional Skills in Applied Bioethics Practice
CHL3052Y	Capstone Project in Applied Bioethics

Biostatistics

Course Code	Course Title
CHL5201H	Biostatistics I
CHL5202H	Biostatistics II
CHL5203H	Survey Design and Social Research Methods in Public Health
CHL5207Y	Laboratory in Statistical Design and Analysis
CHL5208Y	Advanced Laboratory in Statistical Design and Analysis
CHL5209H	Survival Analysis I
CHL5210H	Categorical Data Analysis
CHL5212H	Predictive Modelling in the Health Sciences
CHL5213H	Methods for Analysis of Microbiome Data
CHL5220H	Introduction to Quantitative Research
CHL5222H	Analysis of Correlated Data
CHL5223H	Applied Bayesian Methods
CHL5224H	Modern Statistical Genetics
CHL5225H	Advanced Statistical Methods for Clinical Trials
CHL5226H	Mathematical Foundations of Biostatistics
CHL5227H	Introduction to Statistical Methods for Clinical Trials
CHL5228H	Statistical Methods for Genetics and Genomics Research Seminar
CHL5229H	Modern Biostatistics and Statistical Learning
CHL5230H	Applied Machine Learning for Health Data
CHL5231H	Statistical Foundations of Predictive Modeling in Biostatistics
CHL5232H	Applied Spatial Statistics for Public Health Data
CHL5250H	Special Topics in Biostatistics
CHL5260H	Doctoral Seminar Series in Biostatistics

Black Health

Course Code	Course Title
CHL5820H	African/Black Health I: Sociohistorical Overview of Black Health
CHL5821H	African/Black Health II: Chronic Diseases; Sexual and Reproductive Health: Across the Lifespan
CHL5822H	Decolonizing Theory and Methods in African/Black Health Research
CHL5823H	African/Black Practicum Preparation
CHL5824H	Transnational Black Health Policy and Practice
CHL5825H	Black Resistance and Health: Interventions and Social Change

Clinical Public Health

Course Code	Course Title
CHL5630Y	Wound Prevention and Care
CHL5631H	Integrating Public Health and Clinical Care: The Case of TB
CHL5632H	Application of Implementation Science in Global Health
CHL5633H	Planetary and Global Health Ethics

Epidemiology

Course Code	Course Title
CHL5400H	MPH Professional Development Seminar Series
CHL5401H	Epidemiologic Methods I
CHL5402H	Epidemiologic Methods II

Course Code	Course Title
CHL5403H	Epidemiology of Non-Communicable Diseases
CHL5404H	Research Methods I
CHL5405H	Health Trends and Surveillance
CHL5406H	Quantitative Methods for Biomedical Research
CHL5407H	Categorical Data Analysis for Epidemiologic Studies
CHL5408H	Research Methods II
CHL5409H	Cancer Epidemiology
CHL5410H	Occupational Epidemiology
CHL5412H	Communicable Disease Epidemiology, Prevention, and Control
CHL5413H	Public Health Sanitation
CHL5416H	Environmental Epidemiology
CHL5417H	Tobacco and Health: From Cells to Society
CHL5418H	Scientific Overview in Epidemiology
CHL5419H	Social Epidemiology
CHL5420H	Global Health Research Methods
CHL5423H	Doctoral Seminar in Epidemiology
CHL5424H	Advanced Quantitative Methods in Epidemiology
CHL5425H	Mathematical Epidemiology of Communicable Diseases: An Introduction
CHL5426H	Population Perspectives for Epidemiology
CHL5428H	Epidemiological Methods for Causal Mediation Analyses
CHL5429H	Advanced Analytic Methods for Bias in Epidemiologic Studies
CHL5430H	Fundamentals of Genetic Epidemiology
CHL5431H	Spatial Epidemiology: Introductory Methods and Applications
CHL5432H	Epidemiological Methods for Communicable Diseases
CHL5433H	Planetary Health
CHL5434H	Introduction to Knowledge Synthesis for Knowledge Users
CHL5435H	Methods in Reproductive and Perinatal Epidemiology
CHL5438H	Seminar on Social Conditions and Health
JRH1000H	Introduction to Pharmacoepidemiology

Family and Community Medicine

Course Code	Course Title
CHL5601H	Appraising and Applying Evidence to Assist Clinical Decision-Making
CHL5603Y	Social, Political, and Scientific Issues in Family Medicine
CHL5605H	Research Issues in Family Medicine/Primary Care
CHL5606H	Research in Family Medicine/Primary Care Methodological Applications
CHL5607H	Teaching and Learning by the Health Professions: Principles and Theories
CHL5608H	Teaching and Learning by the Health Professions: Practical Issues and Approaches
CHL5609H	Continuing Education in the Health Professions
CHL5610H	Theory and Practice of Behaviour Change in Health Professional Settings
CHL5611H	Continuing Education Planning, Management and Evaluation in the Health Professions
CHL5612H	The Theory and Application of Interprofessional Education for Collaborative Patient-Centred Practice
CHL5613H	Leading Improvement in the Quality of Health Care for Community Populations
CHL5614H	Curriculum Foundations in Health Practitioner Field-Based Education
CHL5615H	Assessment and Evaluation Issues in Health Practitioner Field-Based Education
CHL5616H	Applied Survey Methods for Health Care Professionals
CHL5617H	Educational Technology for Health Practitioner Education
CHL5618H	Family Medicine and Interprofessional Primary Care in the Global Health Context
CHL5619H	Faculty Development in the Health Professions
CHL5622H	Patient-Related Health Care and Public Policy in Canada
CHL5623H	Practical Management Concepts and Cases in Leading Small Health Organizations
CHL5624H	Historical, Ethical, and Philosophical Foundations of Public Health

Global Health

Course Code	Course Title
CHL5700H	Global Health

Course Code	Course Title
CHL5701H	Doctoral Seminar, Collaborative Specialization in Global Health
CHL5702H	History of International Health
CHL5704H	International Human Rights Law and Global Health: The Right to Health in Theory and Practice
CHL5706H	Women and Women's Health in Countries in Conflict
CHL5707H	Health: An Engine for the Journey to Peace
CHL5708H	Global Maternal, Neonatal, and Child Health Development

Indigenous Health

Course Code	Course Title
CHL5520H	Indigenous Health
CHL5521H	Indigenous Practicum Preparation
CHL5522H	Indigenous Food Systems, Environment, and Health
CHL5523H	Indigenous Health and Social Policy
CHL5524H	Indigenous Health Theory and Methods
CHL5525H	Indigenous Social Determinants of Health in Canada
CHL5526H	Indigenous Qualitative Methods

Nutrition and Dietetics

Course Code	Course Title
CHL5650H	Foundations of Practice I
CHL5651H	Foundations of Practice II
CHL5652H	Foundations of Practice III
CHL5653H	Community Nutrition
CHL5654H	Nutrition Programs and Strategies
CHL5655H	Nutrition Metabolism for Public Health Nutrition Professionals
CHL5656Y	Nutrition and Dietetics Culminating Project
NFS1484H	Advanced Nutrition

Occupational and Environmental Health

Course Code	Course Title
CHL5902H	Advanced Occupational Hygiene
CHL5903H	Environmental Health
CHL5904H	Perspectives in Occupational and Environmental Health — Legal and Social Context
CHL5905H	Clinical Studies in Occupational Health
CHL5907H	Radiological Health
CHL5910H	Occupational and Environmental Hygiene I
CHL5911H	Occupational and Environmental Hygiene II
CHL5912H	Occupational and Environmental Toxicology
CHL5914H	Physical Agents I — Noise
CHL5915H	Control of Occupational Hazards
CHL5917H	Concepts in Safety Management
CHL5918H	Biological Hazards in the Workplace and Community
CHL5919H	Public Health Mycology
CHL5920H	Occupational and Environmental Health Doctoral Seminar Series
CHL5921H	Protecting the Public from Air Pollution
CHL5922H	Climate Change and Health
CHL5950H	Special Topics in Occupational and Environmental Health

Public Health Policy

Course Code	Course Title
CHL5300H	Public Health Policy
CHL5308H	Tools and Approaches for Public Health Policy Analysis and Evaluation
CHL5309H	Advanced Analysis of Topical Issues in Public Health Policy

Public Health Sciences

Course Code	Course Title
CHL5005H	Professional Skills for Doctoral Students in Public Health
JRH5124H	Public Health Ethics

Social and Behavioural Health Sciences

Course Code	Course Title
CHL5101H	Social and Behavioural Theory and Health
CHL5102H	Social and Political Forces in Health
CHL5103H	Health Promotion 1
CHL5104H	Health Promotion 2
CHL5105H	Social Determinants of Health
CHL5106H	Theories for Health Promotion and Public Health Intervention
CHL5107H	Introduction to Qualitative Research
CHL5109H	Gender and Health
CHL5110H	Theory and Practice of Program Evaluation
CHL5113H	Global Migration and Health
CHL5114H	Health Communications
CHL5115H	Qualitative Analysis and Interpretation
CHL5116H	Health-in-All-Policies: Approaches to Achieve a Healthier City
CHL5117H	Women, Children, and Adolescent Health: A Glocal Perspective
CHL5118H	International Health, Human Rights, and Peace-Building
CHL5120H	Population Health Perspectives on Mental Health and Addictions
CHL5121H	Genomics, Bioethics, and Public Policy
CHL5122H	Advanced Qualitative Research: Framing, Writing, Beyond
CHL5126H	Building Community Resilience
CHL5128H	Intersectionality, Inequity, and Public Health
CHL5129H	Introduction to Mixed Methods Research for Public Health
CHL5130H	Advanced Methods in Applied Indigenous Health Research
CHL5131H	Theoretical Foundations of Qualitative Health Research
CHL5132H	Population Health Intervention Research (PHIR)
CHL5133H	Evaluating Quantitative Public Health Research
CHL5134H	Institutional Ethnography
CHL5135H	Ecological Public Health
CHL5136H	Race, Ethnicity, and Culture in Health (REACH)
CHL5137H	Theory and Practice of Community-Based Research in Public Health
CHL5150H	Data Collection Methods for Research and Evaluation Projects
JRP1000H	Theory and Method for Qualitative Researchers: An Introduction

Practica Courses

Course Code	Course Title
CHL5620Y	Practicum in Family Community Medicine
CHL5621H	Extension to Practicum in Family Community Medicine
CHL5690H	MScCH Required Practicum
CHL5691H	MScCH Optional Practicum
CHL6010Y	Required MPH Practicum
CHL6011H	Required Practicum Extension
CHL6012Y	Long Extension to Required Practicum
CHL6013H	Required MPH Advanced Standing Practicum
CHL6020Y	Optional MPH Practicum
CHL6021H	Optional Practicum Extension
CHL6022Y	Long Extension to Optional Practicum

Reading Courses and Research Projects

Course Code	Course Title
CHL7001H	Directed Reading
CHL7002H	Directed Research

Special Topics Courses

Course Code	Course Title
CHL8001H	Selected Topics in Public Health Issues
CHL8002H	Selected Topics in Public Health: Methods and Approaches to Research and Practice
CHL8010H	Special Topics
CHL8011H	Special Topics

Doctor of Public Health Courses

Course Code	Course Title
CHL4001H	Contemporary Approaches to Population Health and Health Equity
CHL4002H	Critical Appraisal and Use of Evidence
CHL4003H	High Performance Leadership
CHL4004H	Global Health Policy
CHL4005H	Governance and Financial Leadership
CHL4006H	Seminars in Public Health
CHL4007H	Public Health Advocacy
CHL4008H	Seminars in the Practice of Implementation Science
CHL4009H	Methods and Approaches in Public Health Research
CHL5132H	Population Health Intervention Research (PHIR)
CHL5624H	Historical, Ethical, and Philosophical Foundations of Public Health
HAD5763H	Advanced Methods in Health Services Research
HAD5778H	Comparative Health Systems and Policy
HAD6501H	Introduction to Methods/Methodologies for HPER

Collaborative Specialization Courses

Addiction Studies

Course Code	Course Title
PAS3700H	Multidisciplinary Aspects of Addictions
PAS3701H	Advanced Research Issues in Addictions

Community Development

Course Code	Course Title
UCS1000H	Community Development

Rehabilitation Sciences

Rehabilitation Sciences: Introduction

Faculty Affiliation

Medicine

Degree Programs

Rehabilitation Science

MSc and PhD

- Fields:
  - Movement Science;
  - Occupational Science;
  - Practice Science (admissions have been administratively suspended);
  - Rehabilitation Health Services Studies;
  - Rehabilitation Technology Sciences;
  - Social and Cognitive Rehabilitation Sciences;
  - Speech-Language Pathology.

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Aging, Palliative and Supportive Care Across the Life Course**
  - Rehabilitation Science, MSc, PhD
  - Speech-Language Pathology, MSc, PhD
- **Bioethics** (admissions have been administratively suspended)
  - Rehabilitation Science, MSc, PhD
- **Biomedical Engineering** (admissions have been administratively suspended)
  - Rehabilitation Science, MSc, PhD
- **Cardiovascular Sciences**
  - Rehabilitation Science, MSc, PhD
- **Global Health (U of T Global Scholar)**
  - Rehabilitation Science, MSc, PhD
- **Health Services and Policy Research** (admissions have been administratively suspended)
  - Rehabilitation Science, MSc
- **Musculoskeletal Sciences**
  - Rehabilitation Science, MSc, PhD
- **Neuroscience**
  - Rehabilitation Science, MSc, PhD
  - Speech-Language Pathology, MSc, PhD
- **Resuscitation Sciences** (admissions have been administratively suspended)
  - Rehabilitation Science, MSc, PhD
- **Robotics**
  - Rehabilitation Science, MSc, PhD
- **Women's Health**
  - Rehabilitation Science, MSc, PhD
- **Workplace Learning and Social Change**
  - Rehabilitation Science, MSc, PhD

Overview

Rehabilitation sciences is a multidisciplinary, integrated science dedicated to the study of human function and participation and its relationship to health and well-being. Using basic and applied methods, the science is focused on phenomena at the level of the cell, muscle/brain, person, family, community, or society to develop and evaluate theories, models, processes, measures, interventions, and policies to prevent, reverse, or minimize impairments, enable activity, and facilitate participation.

The academic activities of students in the Rehabilitation Sciences Institute (RSI) cover the full breadth of rehabilitation sciences with over 100 RSI faculty who are distributed throughout the University of Toronto, including teaching hospitals and research institutes.

Contact and Address

Web: www.rsi.utoronto.ca
Email: rsi.admin@utoronto.ca
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Rehabilitation Sciences Institute, University of Toronto
Rehabilitation Sciences Building, Room 160
500 University Avenue
Toronto, Ontario M5G 1V7 Canada

Rehabilitation Science: Graduate Faculty

Full Members

Agur, Anne - BSc, MSc, PhD
Astell, Arlene - BSc, PhD
Bayley, Mark - MD
Beal, Deryk - BA, MHSc, PhD
Biddiss, Elaine Alisa - MASc, PhD
Black, Sandra - BSc, MD
Bressmann, Tim - MPH, PhD
Brooks, Dina - BSc(PT), MSc, PhD
Buliung, Ronald - MA, PhD
Cameron, Jill - BSc, MS, PhD
Campos, Jennifer - BA, PhD
Chau, Tom - PhD
Chu, Charlene - BSc, BScN, MN, PhD
Colantonio, Angela - BA, BSc(OT), MHSc, PhD ***(Director)***
Colella, Tracey J.F. - MSc, PhD
Colquhoun, Heather - PhD
De Nil, Luc - MSc, PhD
Fehlings, Darcy - MD
Fernie, Geoffrey - BSc, PhD
Forhan, Mary - BSc(OT), MHSc, PhD
Gibson, Barbara - MSc, BMR(PT), PhD
Green, Robin - PhD

Guilcher, Sara - BSc, MSc, MSc(PT), PhD
Ho, Emily - BSc(OT), MEd, PhD, PhD
Iaboni, Andrea - BSc, MD, PhD
Jaglal, Susan - BSc, MSc, PhD
King, Gillian - BA, MA, PhD
Kontos, Pia - BA, MA, PhD
Martino, Rosemary - BS, MA, MSc, PhD
McGilton, Kathy - BScN, MN, PhD
McIlroy, William - BSc, PhD
McPherson, Amy - BSc, PhD
Mihailidis, Alex - BASc, MASc, PhD
Mustard, Cameron - AB, ScD
Nixon, Stephanie - BHSc(PT), BA, MSc, PhD
Nowrouzi-Kia, Behdin - BSc, MSc
O'Brien, Kelly - BSc(PT), BS, PhD
Parsons, Janet - BSc(PT), BA, MSc, PhD
Popovic, Milos - DipIng, PhD
Rabin, Jenny - PhD
Rappolt, Susan - BSc(OT), MSc, PhD
Reed, Nick - BA, MSc, PhD
Reid, Darlene - BMR(PT), PhD
Renwick, Rebecca - DipOT, BA, PhD
Sabiston, Catherine - BS, MA, PhD
Salbach, Nancy - BSc(PT), BS, MSc, PhD
Steele, Catriona - BA, MHSc, PhD
Thaut, Michael - PhD
van Lieshout, Pascal - MA, MA, PhD
Wang, Rosalie - BSc, BSc(OT), PhD
Washington, Karla - BA, MSc, PhD
Williams, Charmaine - BA, BSc, MSW, PhD
Wong, Andy Kin On - BS, PhD
Yunusova, Yana - MS, MA, PhD
Zabjek, Karl - BSc, MClSc , PhD

Members Emeriti

Dawson, Deirdre - BSc, MSc, PhD
Friedland, Judith - BA, MA, PhD
Kirsh, Bonnie - BSc(OT), MEd, PhD
Polatajko-Howell, Helene J. - PhD
Yoshida, Karen - BSc, BPHE, MSc, PhD

Associate Members

Bethell, Jennifer Margaret - PhD
Chan, Brian Chun-Fai - BScPhm, MSc, PhD
Craven, Beverley Catharine - MD
Furlan, Julio - MSc, DrMed, PhD
Gabison, Sharon - BSc, BSc(PT), MSc
Hunt, Anne - MSc, PhD
Kalsi-Ryan, Sukhvinder - BSc(PT)
Kingsnorth, Shauna - BS, MA, PhD
Kokorelias, Kristina M. - MSc, PhD
Kroshus, Emily - DSc
MacKay, Crystal - MHSc
Markoulakis, Roula - MSc, PhD
Moola, Fiona - BPHE, MSc, PhD
Mori, Brenda - BSc(PT), MSc, PhD
Niles, Chavon - BE, BS, AM, PhD
Ross, Tim - PhD
Rowland, Paula - BS, BS
Simic, Tijana - BSc, MHSc, PhD
Simpson, Robert - MBChB
Switzer-Mcintyre, Sharon - BPHE, BSc, MEd, PhD
Wasilewski, Marina B. - BSc, MSc, PhD
Wickerson, Lisa - BSc(PT), BSc(PT), MSc, PhD
Zinman, Lorne - MSc, MD

Rehabilitation Sciences: Rehabilitation Science MSc

The MSc program is designed for graduate students who ultimately want research-related careers in health science disciplines. It can also serve as a stepping stone on the pathway to advanced research training for students planning to pursue a PhD in Rehabilitation Science or related fields.

The program is offered in the following fields: 1) Movement Science; 2) Occupational Science; 3) Practice Science; 4) Rehabilitation Health Services Studies; 5) Rehabilitation Technology Sciences; 6) Social and Cognitive Rehabilitation Sciences; and 7) Speech-Language Pathology.

The MSc is mainly taken on a full-time basis. A part-time option is available in exceptional situations and applicants interested in the part-time option should contact the program to discuss this option. Part-time applicants should be aware that it is the student's responsibility to modify their work schedule to accommodate required coursework since course times are not flexible.

Fields: 1) Movement Science; 2) Occupational Science; 3) Rehabilitation Health Services Studies; 4) Rehabilitation Technology Sciences; 5) Social and Cognitive Rehabilitation Sciences; 6) Speech-Language Pathology

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Rehabilitation Sciences Institute's additional admission requirements stated below.
- Applicants must have graduated with a minimum B+ average in senior-level courses in the final two years of a four-year degree program from a recognized university, with a strong undergraduate science background including a course in research design and/or statistics. The four-year degree may be in Occupational Therapy, Physical Therapy, Speech-Language Pathology, or a related discipline. Related disciplines include basic sciences, engineering, kinesiology, nursing, psychology, social work, sociology, and physical and health education.
- Applicants must identify a faculty member who has agreed to serve as research supervisor. The research supervisor is expected to examine a completed thesis and/or manuscripts and university transcripts.
- Applicants who were educated outside Canada, whose primary language is not English, and who graduated from a university where the language of instruction and examination was not English, must demonstrate

proficiency in the English language through the successful completion of one of the following tests:
  - **Test of English as a Foreign Language (TOEFL) and the Test of Written English (TWE)** with the following minimum scores:
    - paper-based TOEFL: 600 and 5 on the TWE
    - Internet-based TOEFL (IBT): 100/120 and 22/30 on the writing and speaking sections.
  - **International English Language Testing System (IELTS):** minimum score of 7.5.
  - **Certificate of Proficiency in English (COPE):** see General Regulations, 4.3 English-Language Proficiency.
  - **U of T School of Continuing Studies academic preparation:** see General Regulations, 4.3 English-Language Proficiency.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **2.0 full-course equivalents (FCEs)** as follows:
  - REH1100H *Introduction to Rehabilitation Research*.
  - REH2001H *RSI MSc Seminar — Foundations of Professional Development*. Students are expected to attend for one year.
  - 0.5 FCE in research methods or statistics.
  - 0.5 FCE in an area related to the student's thesis.
- Submission of a **thesis** and completion of an **oral examination** of the thesis.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 15 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Rehabilitation Sciences: Rehabilitation Science MSc; Field: Practice Science

Effective January 2021, admissions to the field in Practice Science have been administratively suspended.

Field: Practice Science

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Rehabilitation Sciences Institute's additional admission requirements stated below.
- Applicants must have graduated with a minimum B+ average in senior-level courses in the final two years of a four-year degree program from a recognized university, with a strong undergraduate science background including a course in research design and/or statistics. The four-year degree may be in Occupational Therapy, Physical Therapy, Speech-Language Pathology, or a related discipline. Related disciplines include basic sciences, engineering, kinesiology, nursing, psychology, social work, sociology, and physical and health education.
- Applicants must identify a faculty member who has agreed to serve as research supervisor. The research supervisor is expected to examine a completed thesis and/or manuscripts and university transcripts.
- Applicants who were educated outside Canada, whose primary language is not English, and who graduated from a university where the language of instruction and examination was not English, must demonstrate proficiency in the English language through the successful completion of one of the following tests:
  - **Test of English as a Foreign Language (TOEFL) and the Test of Written English (TWE)** with the following minimum scores:
    - paper-based TOEFL: 600 and 5 on the TWE
    - Internet-based TOEFL (IBT): 100/120 and 22/30 on the writing and speaking sections.
  - **International English Language Testing System (IELTS):** minimum score of 7.5.
  - **Certificate of Proficiency in English (COPE):** see General Regulations, 4.3 English-Language Proficiency.
  - **U of T School of Continuing Studies academic preparation:** see General Regulations, 4.3 English-Language Proficiency.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **3.5 full-course equivalents (FCEs)** as follows:
  - REH1100H *Theory and Research in Rehabilitation Science*.
  - REH2001Y *Rehabilitation Presentations and Proceedings*. Students are expected to attend for one year.
  - 0.5 graduate FCE in research methods.
  - REH3301H *Knowledge Translation in Rehabilitation: Foundational Knowledge and Innovative Applications*.
  - REH3302H *Determinants of Rehabilitation Practice*.
  - REH3303H *Rehabilitation Clinical Practicum*.
  - Students may be required to take extra courses in addition to the degree requirements listed above.
- Submission of a **thesis** and completion of an **oral examination** of the thesis.
- Minimum of 12 months of full-time study. Students should be aware that the completion of the thesis may take longer.
- The part-time option is not available in the Practice Science field.
- Reclassification (transfer). MSc students who demonstrate outstanding potential for advanced research in the discipline may be recommended by their supervisory committee for a reclassification examination which, when passed, allows them to transfer into the PhD program. The examination is normally undertaken following the completion of at least one session and within 18 months of registration in the MSc program.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Rehabilitation Sciences: Rehabilitation Science PhD

The PhD program will prepare candidates to have a career as an independent scientist; that is, graduates will feed the demand for rehabilitation scientists in government, industry, or academia in Canada and the global market. Graduates will be expected to acquire autonomy in conducting research and developing an independent research program. The program is designed to provide a broad knowledge of rehabilitation science research as well as advanced research skills and methodologies including acquisition of funding, formulation of research questions, discovery of new knowledge, data collection, analysis and interpretation, scholarly presentation, and publication and translation of knowledge for consumption by appropriate stakeholders.

The program is offered in the following fields: 1) Movement Science; 2) Occupational Science; 3) Practice Science; 4) Rehabilitation Health Services Studies; 5) Rehabilitation Technology Sciences; 6) Social and Cognitive Rehabilitation Sciences; and 7) Speech-Language Pathology.

Applicants may enter the PhD program via one of three routes: 1) following completion of an appropriate master's degree; 2) transfer from the University of Toronto MSc program; or 3) direct entry following completion of a BSc degree.

Fields: 1) Movement Science; 2) Occupational Science; 3) Rehabilitation Health Services Studies; 4) Rehabilitation Technology Sciences; 5) Social and Cognitive Rehabilitation Sciences; 6) Speech-Language Pathology

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Rehabilitation Sciences Institute\'s additional admission requirements stated below.
- Applicants must have graduated with a minimum A– from a relevant thesis-based master's program, such as Occupational Therapy, Physical Therapy, Rehabilitation Sciences, and Speech-Language Pathology.
- Applicants must submit the following along with their application: a letter of intent, two confidential reference letters that indicate the applicant's preparation and competence to conduct research, and curriculum vitae.
- Applicants may be counselled prior to admission and provided with materials regarding potential PhD supervisors. Applicants must identify a faculty member who has agreed to serve as research supervisor. The research supervisor is expected to examine a completed thesis and/or manuscripts and university transcripts.
- Applicants who were educated outside Canada, whose primary language is not English, and who graduated from a university where the language of instruction and examination was not English, must demonstrate proficiency in the English language through the successful completion of one of the following tests:
  - **Test of English as a Foreign Language (TOEFL) and the Test of Written English (TWE)** with the following minimum scores:
    - paper-based TOEFL: 600 and 5 on the TWE
    - Internet-based TOEFL (IBT): 100/120 and 22/30 on the writing and speaking sections.
  - **International English Language Testing System (IELTS):** minimum score of 7.5.
  - **Certificate of Proficiency in English (COPE):** see General Regulations, 4.3 English-Language Proficiency.
  - **U of T School of Continuing Studies academic preparation:** see General Regulations, 4.3 English-Language Proficiency.

Completion Requirements

- **Coursework.** Students must successfully complete a minimum of **1.5 full-course equivalents (FCEs)** as follows:
  - REH3001H *RSI PhD Seminar — Foundations of Professional Development*. Attendance is expected during Year 1 of the program.
  - 0.5 FCE in advanced research methods or statistics.
  - 0.5 FCE in an area related to the student's thesis.
- A **candidacy examination**, with written and oral components, to be taken in the first 18 months of the program.
- Completion and defence of a **thesis**.
- Students are encouraged to participate in student and faculty **research seminars** in addition to their regular course requirements.
- **Residence.** Students are expected to be on campus and participating full-time until all program requirements are completed.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Transfer)

Transfer Requirements

Transfer applicants must:

- Be enrolled in the MSc program in Rehabilitation Science. Excellent students with high academic standing (normally a minimum A– average in MSc courses) who have clearly demonstrated the ability to do research at the doctoral level may be considered for transfer to the PhD program. Recommendation of the advisory committee is required.
- Successfully complete a reclassification transfer exam within 18 months of starting the MSc program.
- Successfully complete REH1100H *Introduction to Rehabilitation Research*

- Successfully complete a research methods or statistics course at the master's level.
- Be concurrently enrolled in REH2001H *RSI MSc — Foundations of Professional Development* (Credit/No Credit).

Completion Requirements

- **Coursework.** Students must successfully complete a minimum of **3.0 full-course equivalents (FCEs)** as follows:
  - REH1100H *Introduction to Rehabilitation Research*.
  - REH3001H *RSI PhD Seminar — Foundations of Professional Development*.
  - 0.5 FCE in research methods or statistics.
  - 0.5 FCE in advanced research methods or statistics.
  - 1.0 FCE in an area related to the student's thesis.
- A **transfer examination**, with written and oral components, to be taken in the first 18 months of the program.
- Completion and defence of a **thesis**.
- Students are encouraged to participate in student and faculty **research seminars** in addition to their regular course requirements.
- **Residence.** Students are expected to be on campus and participating full-time until all program requirements are completed.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Rehabilitation Sciences Institute\'s additional admission requirements stated below.
- Well-qualified students with excellent research potential holding a BSc degree may be considered for direct admission to the PhD program. These applicants must:
  - Have a minimum A+/A average (GPA 4.0) in an undergraduate program from a recognized university.
  - Have previous relevant research experience, outstanding references, and a personal recommendation from a potential supervisor.
- Applicants must submit the following along with their application: a letter of intent, two confidential reference letters that indicate the applicant’s preparation and competence to conduct research, and curriculum vitae.
- Applicants may be counselled prior to admission and provided with materials regarding potential PhD supervisors. Applicants must identify a faculty member who has agreed to serve as research supervisor. The research supervisor is expected to examine a completed thesis and/or manuscripts and university transcripts.
- Applicants who were educated outside Canada, whose primary language is not English, and who graduated from a university where the language of instruction and examination was not English, must demonstrate proficiency in the English language through the successful completion of one of the following tests:
  - **Test of English as a Foreign Language (TOEFL) and the Test of Written English (TWE)** with the following minimum scores:
    - paper-based TOEFL: 600 and 5 on the TWE
    - Internet-based TOEFL (IBT): 100/120 and 22/30 on the writing and speaking sections.
  - **International English Language Testing System (IELTS):** minimum score of 7.5.
  - **Certificate of Proficiency in English (COPE):** see General Regulations, 4.3 English-Language Proficiency.
  - **U of T School of Continuing Studies academic preparation:** see General Regulations, 4.3 English-Language Proficiency.

Completion Requirements

- **Coursework.** A minimum of **3.0 full-course equivalents (FCEs)** as follows:
  - REH1100H *Introduction to Rehabilitation Research*.
  - REH3001H *RSI PhD Seminar — Foundations of Professional Development*. Attendance is expected during Year 1 of the program.
  - 0.5 FCE in research methods or statistics.
  - 0.5 FCE in advanced research methods or statistics.
  - 1.0 FCE in an area related to the student's thesis.
- A **candidacy examination**, with written and oral components, to be taken in the first 2.5 years of the program.
- Completion and defence of a **thesis**.
- Students are encouraged to participate in student and faculty **research seminars** in addition to their regular course requirements.
- **Residence.** Students are expected to be on campus and participating full-time until all program requirements are completed.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Rehabilitation Sciences: Rehabilitation Science PhD; Field: Practice Science

Effective January 2021, admissions to the field in Practice Science have been administratively suspended.

Field: Practice Science

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also

satisfy the Rehabilitation Sciences Institute's additional admission requirements stated below.
- Applicants must have graduated with a minimum A– from a relevant thesis-based master's program, such as Occupational Therapy, Physical Therapy, Rehabilitation Sciences, and Speech-Language Pathology.
- Applicants must submit the following along with their application: a letter of intent, two confidential reference letters that indicate the applicant's preparation and competence to conduct research, and curriculum vitae.
- Applicants may be counselled prior to admission and provided with materials regarding potential PhD supervisors. Applicants must identify a faculty member who has agreed to serve as research supervisor. The research supervisor is expected to examine a completed thesis and/or manuscripts and university transcripts.
- Well-qualified students with excellent research potential holding a BSc degree may be considered for direct admission to the PhD program. These applicants must:
  - Have a minimum A+/A average (GPA 4.0) in an undergraduate program from a recognized university;
  - Have previous relevant research experience, outstanding references, and a personal recommendation from a potential supervisor.
- Applicants who were educated outside Canada, whose primary language is not English, and who graduated from a university where the language of instruction and examination was not English, must demonstrate proficiency in the English language through the successful completion of one of the following tests:
  - **Test of English as a Foreign Language (TOEFL) and the Test of Written English (TWE)** with the following minimum scores:
    - paper-based TOEFL: 600 and 5 on the TWE
    - Internet-based TOEFL (IBT): 100/120 and 22/30 on the writing and speaking sections.
  - **International English Language Testing System (IELTS):** minimum score of 7.5.
  - **Certificate of Proficiency in English (COPE):** see General Regulations, 4.3 English-Language Proficiency.
  - **U of T School of Continuing Studies academic preparation:** see General Regulations, 4.3 English-Language Proficiency.

Completion Requirements

- **Coursework.** A minimum of **3.5 full-course equivalents (FCEs)** as follows:
  - REH3100H *Advanced Rehabilitation Research Issues* or equivalent if an equivalent was not taken at the master's level.
  - REH3001Y *Advanced Rehabilitation Presentation and Proceedings*. Attendance is expected during the first two years of the program. Students remain enrolled and are encouraged to attend until completion of the degree.
  - REH3301H *Knowledge Translation in Rehabilitation: Foundational Knowledge and Innovative Applications*.
  - REH3302H *Determinants of Rehabilitation Practice*.
  - REH3303H *Rehabilitation Clinical Practicum*.
  - An advanced research methods course (0.5 FCE).
  - Students may be required to take extra courses in addition to the degree requirements listed above.
- A **comprehensive examination**, with written and oral components, to be taken in the first 18 months of the program.
- Completion and defence of a **thesis**.
- Students are encouraged to participate in student and faculty **research seminars** in addition to their regular course requirements.
- **Residence.** Students are expected to be on campus and participating full-time until all program requirements are completed.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Rehabilitation Sciences Institute\'s additional admission requirements stated below.
- Well-qualified students with excellent research potential holding a BSc degree may be considered for direct admission to the PhD program. These applicants must:
  - Have a minimum A+/A average (GPA 4.0) in an undergraduate program from a recognized university;
  - Have previous relevant research experience, outstanding references, and a personal recommendation from a potential supervisor.
- Applicants must submit the following along with their application: a letter of intent, two confidential reference letters that indicate the applicant's preparation and competence to conduct research, and curriculum vitae.
- Applicants may be counselled prior to admission and provided with materials regarding potential PhD supervisors. Applicants must identify a faculty member who has agreed to serve as research supervisor. The research supervisor is expected to examine a completed thesis and/or manuscripts and university transcripts.
- Applicants who were educated outside Canada, whose primary language is not English, and who graduated from a university where the language of instruction and examination was not English, must demonstrate proficiency in the English language through the successful completion of one of the following tests:
  - **Test of English as a Foreign Language (TOEFL) and the Test of Written English (TWE)** with the following minimum scores:
    - paper-based TOEFL: 600 and 5 on the TWE
    - Internet-based TOEFL (IBT): 100/120 and 22/30 on the writing and speaking sections.
  - **International English Language Testing System (IELTS):** minimum score of 7.5.
  - **Certificate of Proficiency in English (COPE):** see General Regulations, 4.3 English-Language Proficiency.
  - **U of T School of Continuing Studies academic preparation:** see General Regulations, 4.3 English-Language Proficiency.

Completion Requirements

- **Coursework.** A minimum of **5.0 full-course equivalents (FCEs)** as follows:
  - REH3100H *Advanced Rehabilitation Research Issues* or equivalent if an equivalent was not taken at the master's level.
  - REH3001Y *Advanced Rehabilitation Presentation and Proceedings*. Attendance is expected during the first two years of the program. Students remain enrolled and are encouraged to attend until completion of the degree.
  - REH3301H *Knowledge Translation in Rehabilitation: Foundational Knowledge and Innovative Applications*.
  - REH3302H *Determinants of Rehabilitation Practice*.
  - REH3303H *Rehabilitation Clinical Practicum*.
  - REH1100H *Theory and Research in Rehabilitation Science*.
  - REH1120H *Research Methods for Rehabilitation Science*.
  - REH1130H *Theory and Research in Occupational Science* **or** REH1140H *Theory and Research in Physical Therapy*.
  - An advanced research methods course (0.5 FCE).
  - Students may be required to take extra courses in addition to the degree requirements listed above.
- A **comprehensive examination**, with written and oral components, to be taken in the first 2.5 years of the program.
- Completion and defence of a **thesis**.
- Students are encouraged to participate in student and faculty **research seminars** in addition to their regular course requirements.
- **Residence.** Students are expected to be on campus and participating full-time until all program requirements are completed.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Rehabilitation Sciences: Rehabilitation Science MSc, PhD Courses

Since not all courses are offered each academic year, the department should be consulted each session as to course offerings.

Course Code	Course Title
REH1100H	Introduction to Rehabilitation Research
REH1120H	Research Methods for Rehabilitation Science
REH1510H	Disordered and Restorative Motor Control
REH2000H	Individual Reading and Research Course
REH2001H	RSI MSc Seminar — Foundations of Professional Development
REH3001H	RSI PhD Seminar — Foundations of Professional Development
REH3140H	Disability, Embodiment, and Voice in the Rehabilitation Science Context
REH3301H	Knowledge Translation in Rehabilitation: Foundational Knowledge and Innovative Applications
REH3302H	Determinants of Rehabilitation Practice
REH3303H	Rehabilitation Clinical Practicum
REH3400H	Therapeutic Exercise in Rehabilitation: Emerging Trends and Research Approaches
REH3500H	Gender, Work, and Health
REH3600H	Synthesis Toolkit: Approaches and Methodologies
REH5100H	Introduction to Cognitive Rehabilitation Neuroscience I: Basic Science to Clinical Applications
JRP1000H	Theory and Method for Qualitative Researchers: An Introduction

Religion

Religion: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Religion

MA and PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Bioethics** (admissions have been administratively suspended)
  - Religion, MA, PhD
- **Book History and Print Culture**
  - Religion, MA, PhD
- **Diaspora and Transnational Studies**
  - Religion, MA, PhD
- **Environmental Studies**
  - Religion, MA, PhD
- **Ethnic, Immigration and Pluralism Studies**
  - Religion, MA, PhD
- **Jewish Studies**
  - Religion, MA, PhD
- **Knowledge Media Design**
  - Religion, MA, PhD
- **Mediterranean Archaeology**
  - Religion, PhD
- **Sexual Diversity Studies**
  - Religion, MA, PhD
- **South Asian Studies**
  - Religion, MA, PhD
- **Women and Gender Studies**
  - Religion, MA, PhD
- **Women's Health**
  - Religion, MA, PhD

Overview

The Department for the Study of Religion offers **Master of Arts** and **Doctor of Philosophy** programs in the study of religion and facilitates research and publication on religion. The department consolidates the vast curricular and faculty resources that are distributed throughout the many departments and colleges of the University and enables its students to use any resource in the University which serves the study of religion.

The department conceives the academic study of religion in interdisciplinary terms and embraces humanistic, historical, and social scientific approaches and methods. Programs of study are constructed individually to fit the specific needs and interests of each student.

Contact and Address

Web: www.religion.utoronto.ca
Email: religion.grad@utoronto.ca
Telephone: (416) 978-3057
Fax: (416) 978-1610

Department for the Study of Religion
University of Toronto
Room 305, 170 St. George Street
Toronto, Ontario M5R 2M8 Canada

Religion: Graduate Faculty

Full Members

Airhart, Phyllis - BA, MA, PhD
Bendlin, Andreas - PhD
Bergen, Doris - MA, PhD
Black, Deborah - BA, MA, PhD
Blouin, Katherine - BA, MA, PhD, PhD
Boddy, Janice - BA, MA, PhD
Bohaker, Heidi - BA, BEd, MA, DPhil
Borrows, John - LLB, LLM, MA, LLD
Bryant, Joseph - BA, MA, PhD
Chrubasik, Boris - MA, PhD
Clarke, Kamari - BA, MA, MPH, LLM, PhD
Coleman, Simon - BA, PhD
Daswani, Girish - BSc, BSc, MS, PhD
Dhand, Arti - BA, MA, PhD
DiCenso, James - BA, MA, PhD
Emmrich, Christoph - PhD
Emon, Anver - BA, LLB, LLM, MA, PhD, SJD, CRC
Fadel, Mohammad - BA, JD, PhD
Fox, Harry - BA, BSc, MA, MS, PhD
Garrett, Frances - BA, MA, PhD
Gibbs, Robert - BA, MA, PhD
Goetschel, Willi - PhD
Green, Kenneth - BA, MA, PhD
Harrak, Amir - MA, LTh, PhD
Harris, Jennifer - BA, MA, PhD
Hewitt, Marsha - BA, MA, PhD
Hill, Susan - PhD
Jain, Kajri - PhD
Junior, Nyasha - MDiv, PhD
Kana'an, Ruba - MPH, MPH, DPhil
Kasturi, Malavika - DPhil
Khan, Abrahim - BS, BD, MA, PhD
Kingwell, Mark - BA, MA, MPH, DFA, PhD
Klassen, Pamela - BA, MA, PhD ***(Chair and Graduate Chair)***
Kloppenborg, John - BA, MA, PhD
Lambek, Michael - BA, MA, PhD
Locklin, Reid - AB, MTh, PhD
Marshall, John - BA, MA, PhD
Marshall, Ruth - BA, MA, DPhil
Metso, Sarianna - MA, PhD
Mittermaier, Amira - MA, PhD

Moumtaz, Nada - PhD
Mullin, Amy - BA, PhD
Napolitano, Valentina - BSc, MPH, PhD
Newman, Judith - PhD
O'Neill, Kevin - BA, MA, PhD
Raman, Srilata - BA, MPH, PhD
Rao, Ajay - PhD
Razzaque, Arafat - BA, AM, MTh, PhD
Ross, Jill - BA, MA, PhD
Ruffle, Karen - PhD
Saleh, Walid - BA, MA, PhD
Scharper, Stephen - BA, MA, PhD
Schipper, Jeremy - MDiv, PhD
Scott, J. Barton - BA, MA, PhD ***(Director of Graduate Studies)***
Seidman, Naomi - PhD
Sharma, Jayeeta - BA, MA, MPH, PhD
Smith, Kyle - BA, MA, PhD
Subtelny, Maria - BA, PhD
Swenson, Edward - BA, MA, PhD
Tavakoli-Targhi, Mohamad - BA, MA, PhD
Terpstra, Nicholas - BA, MA, PhD
Turner, Dale - PhD
Virani, Shafique - PhD

Members Emeriti

Novak, David - AB, PhD

Associate Members

Bugg, Laura Beth - DTh
Charles, Ronald - BA, MDiv, MTh, PhD
Derry, Ken - PhD
Doostdar, Alireza - PhD
Dost, Suleyman - BA, MA, PhD
Freschi, Elisa - PhD
Goldberg, Sol - MA, PhD
Graheli, Alessandro - BA, MA, PhD
Hampton, Alexander - PhD
Lindsay, Rory - BA, BA, MA, MA, PhD, PhD
Mills, Libbie - BA, BSc
Nizri, Yigal - BFA, PhD
Raffaelli, Enrico - PhD
Richardson, Sarah - BA, MA
Verskin, Sara - AB, AB, PhD, PhD
Vig, Julie - BA, MA, PhD
White, Kevin - MA, PhD

Religion: Religion MA

The Master of Arts (MA) program may be taken on a full-time or part-time basis. The department's Graduate Studies Handbook, available on the web and from the department, provides details on admissions and programs as well as the research and teaching interests of the faculty.

MA Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department for the Study of Religion's additional admission requirements stated below.
- Normally, an appropriate bachelor's degree with specialization in religion or a cognate discipline from a recognized university, broadly equivalent to the University of Toronto's BA Specialist degree in religion, with at least A– standing in the final year. Students without appropriate preparation may be required to take additional work either before admission or during an extended master's program.

Completion Requirements

- **Courses.** Students must complete **4.0 full-course equivalents (FCEs)** including:
  - RLG2000Y *Major Research Paper*.
  - RLG1200H *MA Method and Theory Workshop*.
  - One Gateway Seminar (0.5 FCE).
  - One additional Religion course (0.5 FCE).
  - In some cases, students may be required to take additional courses, some of which may be at the undergraduate level. Students may be required to take more than 4.0 FCEs if their preparation is considered deficient in a subject required for their program.
  - Satisfactory performance requires the completion of all coursework taken for graduate credit with an average grade of at least A–.
- **Language(s).** Reading knowledge of at least one language, in addition to English, selected from languages of modern scholarship and/or necessary source languages, as approved by the Director of Graduate Studies.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 8 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Religion: Religion PhD

From the point of admission onward, doctoral student programs must be matched with the expertise of faculty who help supervise the student's work. The department's Graduate Studies Handbook, available on the web and from the department, provides details on admissions and programs as well as the research and teaching interests of the faculty. The **Doctor of Philosophy (PhD) program** is taken on a full-time basis.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department for the Study of Religion's additional admission requirements stated below.
- Normally, completion of all requirements of the department's MA program, or a comparable program at another university, with an average of at least A– in coursework and with no individual course falling below B.

Completion Requirements

- **Courses.** Students must complete a minimum of **4.0 full-course equivalents (FCEs)**, including the following:
  - RLG1000Y *Method and Theory in the Study of Religion*.
  - One Gateway Seminar (0.5 FCE).
  - Two additional Religion courses (1.0 FCE).
  - Students may be required to take more than 4.0 FCEs if their preparation is considered deficient in a subject required for their program.
  - Satisfactory performance requires the completion of all coursework taken for graduate credit with an average grade of at least A–.
- **Languages.** Reading knowledge of at least two languages in addition to English, selected from languages of scholarship and necessary source languages, as approved by the Director of Graduate Studies. Classical and modern forms of the same language are not permitted. The language requirements must be fulfilled before writing the general examinations. Students who complete a language requirement in the department's MA program with a grade of B+ or higher are exempt from having to repeat this language in the PhD program.
- **Professionalization seminar.** Doctoral students must complete SRD4444Y *Doctoral Seminar Series*. This seminar consists of a series of workshops which must be completed to fulfil the requirement.
- **General examinations.** Upon completion of coursework and language requirements, the student's supervisory committee will set General Examinations to assess the student's readiness for thesis research. There are three components in the General Examinations:
  - A four-hour written examination will cover the student's broad area or subfield;
  - A four-hour written examination will cover material pertinent to the student's dissertation topic; and
  - A two-hour oral examination on all materials assigned for the General Examinations.
- A student who fails any portion of the General Examinations may be re-examined once, no later than nine months after the date of the first examination. The General Examinations must be completed before the end of the third year of doctoral study.
- **Thesis proposal.** Within three months of successful completion of the General Examinations, the student must submit a thesis proposal for approval by the student's supervisory committee.
- **Thesis.** Upon approval of the thesis proposal by the student's supervisory committee, the candidate proceeds to research and write a doctoral thesis which must be defended successfully at a Doctoral Final Oral Examination.
- **Colloquium presentation.** Once general examinations are completed, PhD candidates are required to present at least once in the Department for the Study of Religion's colloquium before undertaking their Doctoral Final Oral Examination.
- **Doctoral Final Oral Examination.** The supervisory committee must approve the completed thesis before it is submitted for examination.
- **Residence.** Students are required to spend at least two Fall and Winter sessions on campus in full-time study, normally in Years 1 and 2.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

Religion: Religion MA, PhD Courses

Not all courses are offered every year. Please consult the department's website, which lists the courses the department will offer this year as well as those cross-listed from other departments.

Religion

Course Code	Course Title
RLG1000Y	Method and Theory in the Study of Religion
RLG1002H	Philosophy of Religion Gateway Seminar
RLG1003H	Islamic Studies Gateway Seminar
RLG1004H	Religions of Mediterranean Antiquity Gateway Seminar
RLG1005H	Jewish Studies Gateway Seminar
RLG1006H	South Asian Religions Gateway Seminar
RLG1200H	The MA Method and Theory Workshop
RLG1501H	Directed Reading
RLG1502H	Directed Reading
RLG2000Y	Major Research Paper
RLG2001H	Transhuman Bonding Rites
RLG2005H	Religion and Posthumanism
RLG2015H	Comparing Religion
RLG2017H	Religion, Secularism, and the Public Sphere
RLG2020H	Early Christianity, Ancient Judaism, Ancient "Magic"

Course Code	Course Title
RLG2021H	Mystical Poetics and the Study of Religious Aesthetics
RLG2022H	Religion, Mourning, and Trauma
RLG2025H	Fragments of Redemption: Sigmund Freud and Theodor W. Adorno
RLG2040H	Commentary: Theory and Practice
RLG2041H	Decolonizing Philology: Asian Textual Traditions
RLG2045H	Modern Buddhist Fiction
RLG2060H	Religion and Philosophy in the European Enlightenment
RLG2064H	Constructing Religion
RLG2065H	Philosophical Texts in Religion
RLG2066H	Great Critics of Religion
RLG2067H	Philosophical Topics in the Study of Religion
RLG2072H	Kant's Theory of Religion
RLG2081H	Trauma, Healing, and Transformation
RLG3104H	Feminist and Womanist Biblical Interpretation
RLG3114H	Ancient Judaism and Christianity in a Colonial Context
RLG3123H	Samson in Text and Tradition
RLG3124H	Biblical Reception Histories
RLG3190H	Pseudepigraphy in Ancient Mediterranean Religion
RLG3200H	The Politics of Bible Translation
RLG3203H	The Talking Book
RLG3212H	Martyrdom in Early Christianity
RLG3216H	Christianity in the Ancient Near East
RLG3217H	Social Networks and Elective Cults in Antiquity
RLG3228H	Social History of the Early Jesus Movement
RLG3242H	Christian Asceticism in Late Antiquity
RLG3243H	The Synoptic Problem
RLG3249H	Studies in the Synoptic Gospels
RLG3250H	Heresy and Deviance in Early Christianity
RLG3252H	The Letter of James and Early Christian Wisdom
RLG3280H	Christianities of South Asia
RLG3290H	Words and Worship in Christian Cultures
RLG3401H	Reading Buddhist Texts I
RLG3402H	Reading Buddhist Texts II

Course Code	Course Title
RLG3419H	Teaching Buddhism
RLG3457H	Buddhism and Healing
RLG3460H	Sanskrit Readings
RLG3461H	Sanskrit Readings II
RLG3501H	Special Topics in Islamic Studies
RLG3504H	Biblical Narratives in the Qur'an
RLG3516H	Islamic Law and Society
RLG3517H	Shiʿi Studies: The State of the Field
RLG3518H	Foundations in Shi'I Studies
RLG3519H	Islamic Intellectual Traditions
RLG3523H	Islamic Origins: Sources, Debates, and Prospects
RLG3527H	The Anthropology of Islam
RLG3528H	Tools of the Craft: Research Fluency in Islamic Studies
RLG3544H	Muslim Material Cultures
RLG3555H	The Prophetic Family in Islamic Tradition
RLG3610H	Wisdom in Second Temple Judaism
RLG3621H	Modern Jewish Thought
RLG3622H	Maimonides and His Modern Interpreters
RLG3623H	The Thought of Leo Strauss
RLG3634H	Worship and Scripture at Qumran
RLG3645H	The Jewish Legal Tradition
RLG3647H	Jewish Traditions in Antiquity: Configuring the Text
RLG3701H	Vaishnavism
RLG3702H	Debates in Classical South Asian Religion and History
RLG3704H	Readings in Sanskrit Literature
RLG3705H	Becoming Hindu: Ritual Life in Hindu Traditions
RLG3718H	Sikhs in Early Modern India: Texts and Encounters
RLG3722H	Approaching the Literary in South Asian Religions
RLG3744H	Hindu Epics
RLG3763H	Readings in Sanskrit Philosophy
RLG3771H	After the Śaiva Age: Regional Śaivism in the Second Millenium
RLG3789H	Burmese Buddhist Literature
RLG3800H	The Anthropocene: Indigenous Perspectives

Course Code	Course Title
RLG3823H	Buddhism and Indigeneity
RLG3931H	Topics in North American Religions
RLG4001H	Directed Reading: TST Seminar
RLG4004H	Colloquium Presentation
SRD4444Y	Doctoral Seminar Series — Compulsory Attendance (Credit/No Credit)

Joint Courses

Course Code	Course Title
JAR1001H	Anthropology of Religion Gateway Seminar
JPR2051H	Fanaticism: A Political History
JPR2058H	Post-secular Political Thought: Religion, Radicalism, and the Limits of Liberalism

Other Departments

Other departments and collaborative specializations (see programs listed at the beginning of this entry) offer courses that may contribute to graduate programs in the study of religion. Visit the department's website for a current listing of such course offerings from:

- Anthropology
- Art History
- East Asian Studies
- English
- Ethnic, Immigration and Pluralism Studies
- Germanic Languages and Literatures
- History
- History and Philosophy of Science and Technology
- Italian Studies
- Law
- Medieval Studies
- Near and Middle Eastern Civilizations
- Philosophy
- Political Science
- Sociology
- Toronto School of Theology

Social Justice Education

Social Justice Education: Introduction

Faculty Affiliation

Ontario Institute for Studies in Education (OISE)

Degree Programs

Social Justice Education

MA, MEd, EdD, and PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Comparative, International and Development Education**
  - Social Justice Education, MA, MEd, EdD, PhD
- **Development Policy and Power**
  - Social Justice Education, MA, MEd
- **Diaspora and Transnational Studies**
  - Social Justice Education, MA, MEd, EdD, PhD
- **Education, Francophonies and Diversity**
  - Social Justice Education, MA, MEd, EdD, PhD
- **Educational Policy** (admissions have been administratively suspended)
  - Social Justice Education, MA, MEd, EdD, PhD
- **Environmental Studies**
  - Social Justice Education, MA, MEd, EdD, PhD
- **Ethnic, Immigration and Pluralism Studies**
  - Social Justice Education, MA, MEd, EdD, PhD
- **Sexual Diversity Studies**
  - Social Justice Education, MA, MEd, EdD, PhD
- **South Asian Studies**
  - Social Justice Education, MA, MEd, EdD, PhD
- **Women and Gender Studies**
  - Social Justice Education, MA, MEd, EdD, PhD
- **Workplace Learning and Social Change**
  - Social Justice Education, MA, MEd, EdD, PhD

Overview

The Department of Social Justice Education offers a multi- and interdisciplinary graduate program developed from the past programs of History and Philosophy of Education as well as Sociology and Equity Studies in Education. It is an intellectual community committed to producing and advancing knowledge on social justice education in Canada and beyond. Social justice education is a term used in robust ways in the department and this allows for diverse meanings and methodologies.

The department's graduate programs are concerned with both theoretical and empirical problems regarding in/equity in educational spaces, broadly conceived. Faculty and students approach their inquiries from disciplinary (e.g., anthropology, history, philosophy, political science, or sociology) and/or interdisciplinary (e.g., anti-colonial, critical race, disability, feminist, francophone, indigenous, or queer) perspectives. The graduate programs focus on identifying new relationships and making connections by asking significant questions about social justice education within and across disciplines. Hence, they foreground research and teaching in social justice education, pursued through analytical and empirical tools from the humanities and social sciences.

The department enables both graduate students and initial teacher education students to explore questions such as, “What was, what is, and what should be the relationship between education and society?” and “What kinds of knowledge do educators need to answer those questions?” The department aims to provide students with the academic knowledge and skills necessary to raise and engage questions of critical importance to educational theories and practices, and their relationship to individuals, communities, and societies.

Contact and Address

Admissions

Initial inquiries regarding admission to graduate studies in the Department of Social Justice Education (SJE) should be made directly to:
Web: www.oise.utoronto.ca/registrar-students
Email: admissions.oise@utoronto.ca
Tel: (416) 978-4300
Fax: (416) 323-9964

Registrar’s Office and Student Experience
Ontario Institute for Studies in Education (OISE)
University of Toronto
252 Bloor Street West, Room 8-225
Toronto, Ontario M5S 1V6 Canada

Program

Web: www.oise.utoronto.ca/sje
Email (Admissions and Programs): oise.sjegrad@utoronto.ca
Phone: (416) 978-0397

Department of Social Justice Education
Ontario Institute for Studies in Education
University of Toronto
252 Bloor Street West, 12th Floor North
Toronto, Ontario M5S 1V6 Canada

Social Justice Education: Graduate Faculty

Full Members

Bakan, Abigail - BA, MA, PhD
Bialystok, Lauren - PhD

Boler, Megan - BA, PhD
Cannon, Martin - MA, PhD
Coloma, Roland Sintos - TD, BA, MA, MA, PhD
Dei, George J.S. - BA, MA, PhD
Farmer, Diane - BA, MA, PhD ***(Associate Chair)***
Gaztambide-Fernandez, Ruben - BM, MEd, EdD ***(Chair and Graduate Chair)***
Hampton, Rosalind - BFA, MA, PhD
Healey, Devon - PhD
Heller, Monica - BA, MA, PhD
Hildyard, Angela - BSc, MA, PhD
Madibbo, Amal - BA, MA, PhD
McCready, Lance - BA, MA, PhD
O'Sullivan, Julia - BA, MA, PhD
Portelli, John - MEd, PhD
Titchkosky, Tanya - BA, MA, PhD
Todorova, Miglena - BA, MA, PhD ***(Associate Chair)***
Tuck, Eve - BA, PhD ***(Graduate Coordinator)***
Walcott, Rinaldo - BA, MA, PhD
Wane, Njoki - BE, MEd, MSc, PhD
Wheelahan, Leesa - BA, MA, PhD

Members Emeriti

Acker, Sandra - BA, MA, PhD
Livingstone, David - BA, PhD

Associate Members

Brant, Jennifer - BA, MEd, PhD
Cooper, Afua - MA, PhD
Doyle-Wood, Stanley - BE, MSS, EdD
Ilmi, Ahmed - BA, MA, PhD
Kellogg, Paul - BA, MA, DrRerPol
Kipkosgei, Evelyn - PhD
Michalko, Rod - BA, MA, PhD
Nxumalo, Fikile - PhD
Oladi Ghadikolaei, Soudeh - PhD
Sherwood, Yvonne Patricia - AA, BA, MA
Stewart, Suzanne - BA, MA, PhD
Wasike, Aggrey - BA, MA, MA, DPhil
Zoric, Terezia - BA, BEd, MA

Social Justice Education: Social Justice Education MA

The Social Justice Education (SJE) program welcomes applicants with diverse, relevant backgrounds. The **Master of Arts (MA) degree program** is a research-based degree program which can be taken on a full-time or part-time basis.

Delivery options: Although not all elective courses are offered in each modality, students may be able to complete the MA degree program through one of three delivery modes:

- in-person (students will mainly complete their coursework and other program requirements in-person, with up to one-third of their coursework online);
- hybrid (students will experience a mix of modes of engagement, with some of their coursework and other program requirements in-person and between one-third and two-thirds of their coursework online); and
- online (students will be able to complete all their coursework and other program requirements online) depending on their choice of a collaborative specialization, or other elective courses.

Note: not all collaborative specializations or courses are offered in each modality. Students should consult with their faculty advisor and/or graduate liaison officer regarding available options.

MA Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the department's additional admission requirements stated below.
- Admission to the MA program requires an appropriate bachelor's degree in a humanities, social science, or cognate discipline from a recognized university, with standing equivalent to a University of Toronto mid-B or better in the final year.
- Applicants must submit the following though the online application system; incomplete applications may be subject to processing delays or rejection:
  - A careful response to all Faculty questions in the online admissions application that demonstrates intellectual interests and concerns relevant to the humanities, or social sciences, and social justice in education as well as reasons for undertaking a program in the department. Include a statement of preference for one or more faculty members whose research is best matched to the student's research interests.
  - Two letters of reference, preferably from university instructors with whom the applicant has studied or worked.
  - At least one sample of written work that demonstrates engagement with the humanities, or social sciences, and social justice in education.
  - Resumé that provides clear and complete information about the applicant's work or field experience related to their proposed studies.

Completion Requirements

- **Coursework.** Students must complete **3.0 full-course equivalents (FCEs)** as follows:
  - Subject to consultation with a faculty advisor, SJE1903H *Major Concepts and Issues in Social Justice Education* is recommended.
  - 2.5 other FCEs, of which at least 1.5 FCEs must be SJE courses.
  - Students who are registered in an optional collaborative specialization may apply to have their SJE course requirement reduced by 0.5 FCE.
  - Students must consult with their faculty advisor before enrolling in any out-of-department course for which they wish to receive SJE credit.
  - Additional courses may be required of some students, and some students may be required to take specified courses in research methods and/or theory.

- Students complete a **thesis** which may lay the groundwork for doctoral research.

Mode of Delivery: In person, Online, Hybrid
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS); 10 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Social Justice Education: Social Justice Education MEd

The Department of Social Justice Education (SJE) welcomes applicants with diverse, relevant backgrounds. The **Master of Education (MEd) degree program** can be taken on a full-time or part-time basis.

Delivery options: Students may choose to pursue the MEd degree program through one of three delivery modes:

- in-person (students will mainly complete their coursework and other program requirements in-person, with up to one-third of their coursework online);
- hybrid (students will experience a mix of modes of engagement, with some of their coursework and other program requirements in-person and between one-third and two-thirds of their coursework online); and
- online (students will be able to complete all their coursework and other program requirements online) depending on their choice of a collaborative specialization, or other elective courses.

Note: not all collaborative specializations or courses are offered in each modality. Students should consult with their faculty advisor and/or graduate liaison officer regarding available options.

MEd Program (Coursework Only Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the department's additional admission requirements stated below.
- Admission to the MEd program requires an appropriate bachelor's degree from a recognized university, with a standing equivalent to a University of Toronto mid-B or better in the final year.
- Applicants must have the equivalent of 12 months of professional experience.
- Applicants must submit the following through the online application system; incomplete applications may be subject to processing delays or rejection:
    - A careful response to all Faculty questions in the online admissions application that demonstrates intellectual interests and concerns relevant to the humanities, or social sciences, and social justice in education as well as reasons for undertaking a program in the department. Include a statement of preference for one or more faculty members whose research is best matched to the student's research interests.
    - Two letters of reference, preferably from university instructors with whom the applicant has studied or worked; the second letter of reference may be written by a work or community-based supervisor.
    - At least one sample of written work that demonstrates engagement with the humanities or social sciences, and social justice in education.
    - Resumé that provides clear and complete information about the applicant's work or field experience related to their proposed studies.

Completion Requirements

- **Coursework.** Students must complete **5.0 full-course equivalents (FCES)** including:
    - Subject to consultation with a faculty advisor, SJE1903H *Major Concepts and Issues in Social Justice Education* is recommended.
    - At least half of the FCEs in an MEd program must be SJE courses.
    - Students who are registered in an optional collaborative specialization may apply to have their SJE course requirement reduced by 0.5 FCE.
    - Students must consult with their faculty advisor before enrolling in any out-of-department course for which they wish to receive SJE credit.

Mode of Delivery: In person, Online, Hybrid
Program Length: 4 sessions full-time (typical registration sequence: FWS-F); 10 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MEd Program (Coursework Plus Major Research Paper Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the department's additional admission requirements stated below.
- Admission to the MEd program requires an appropriate bachelor's degree from a recognized university, with a standing equivalent to a University of Toronto mid-B or better in the final year.
- Applicants must have the equivalent of 12 months of professional experience.
- Applicants must submit the following through the online application system; incomplete applications may be subject to processing delays or rejection:
    - A careful response to all Faculty questions in the online admissions application of intellectual interests and concerns relevant to the humanities or social sciences, and social justice in education as well as reasons for undertaking a program in the department. Include a statement of preference for one or more faculty members whose research is best matched to the student's research interests.

- Two letters of reference, preferably from university instructors with whom the applicant has studied or worked; the second letter of reference may be written by a work or community-based supervisor.
- At least one sample of written work that demonstrates engagement with the humanities or social sciences, and social justice in education.
- Resumé that provides clear and complete information about the applicant's work or field experience related to their proposed studies.

Completion Requirements

- **Coursework.** Students must complete **4.0 full-course equivalents (FCES)** including:
  - Subject to consultation with a faculty advisor, SJE1903H *Major Concepts and Issues in Social Justice Education* is recommended.
  - At least half of the FCEs in an MEd program must be SJE courses.
  - Students who are registered in an optional collaborative specialization may apply to have their SJE course requirement reduced by 0.5 FCE.
  - Students must consult with their faculty advisor before enrolling in any out-of-department course for which they wish to receive SJE credit.
- **Major Research Paper (MRP)**: SJE2001Y *Major Research Paper*.

Mode of Delivery: In person, Online, Hybrid
Program Length: 5 sessions full-time (typical registration sequence: FWS-FW); 10 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Social Justice Education: Social Justice Education EdD

The **Doctor of Education (EdD) degree program** is distinct from the PhD in that students are encouraged to orient towards applied and theoretical dimensions of professional educational practice understood as knowledge, teaching, and learning which takes place within or beyond schooling.

The EdD in Social Justice Education (SJE) is ideal for those with an interest in professional and/or voluntary practice in relevant field domains, where there is a relation between theory and practice and where the skills and commitment of dedicated and research-informed practitioners are pivotal to outcomes. Those interested in the degree program will be professionals including teachers, school and community leaders, health and legal professionals, and those working, volunteering, or seeking employment in related fields in social justice education.

The Department of Social Justice Education welcomes applicants with diverse, relevant backgrounds. The EdD program can be taken on a full-time or part-time basis.

Students cannot transfer between the EdD and PhD programs.

Delivery options: EdD programs are delivered in-person with the possibility of completing the program requirements through a hybrid delivery mode — students will experience a mix of modes of engagement with some of their coursework and other program requirements in-person, and between one-third and two-thirds of their coursework online.

EdD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the department's additional admission requirements stated below.
- Admission to the EdD program requires a University of Toronto MEd or MA in education, or its equivalent from a recognized university, in the same field of specialization proposed at the doctoral level, completed with a standing equivalent to a University of Toronto B+ or better in master's courses.
- Applicants must have the equivalent of 12 months of professional experience.
- Applicants must submit the following through the online application system; incomplete applications may be subject to processing delays or rejection:
  - A careful response to all Faculty questions in the online admissions application that demonstrates intellectual interests and concerns relevant to the humanities or social sciences, and social justice in education as well as reasons for undertaking a program in the department. Include a statement of preference for one or more faculty members whose research is best matched to the student's research interests.
  - Two letters of reference, preferably from university instructors with whom the applicant has studied or worked; the second letter of reference may be written by a work-based supervisor.
  - At least one sample of written work that demonstrates engagement with the humanities or social sciences, and social justice in education.
  - Resumé that provides clear and complete information about the applicant's work or field experience related to their proposed studies.

Completion Requirements

- **Coursework.** Students must complete **4.0 full-course equivalents (FCEs)** as follows:
  - Required half course: SJE3997H *Practicum in Social Justice Education* (72 hours).
  - Subject to consultation with a faculty advisor, SJE3905H *Interdisciplinary Approaches to Research: Theory and Praxis* is recommended.
  - Students who have completed the recommended course SJE3905H must take 3.0 other FCEs, of which at least 1.5 FCEs must be SJE courses.
  - Students who are registered in an optional collaborative specialization may apply to have their SJE course requirement reduced by 0.5 FCE.
  - Students must consult with their faculty advisor before enrolling in any out-of-department course for which they wish to receive SJE credit.
- **Thesis (dissertation in practice).** Students submit a thesis and defend it at a **Doctoral Final Oral Examination**. The thesis (dissertation in practice) is the culminating component of the EdD degree in Social

Justice Education that shall include an identification and investigation of a problem of practice, the application of theory and research to the problem of practice, and a design for action to address the problem of practice. Specifically, the thesis (dissertation in practice) is expected to be the product of original research, designed and implemented in the form of an innovative, impactful, and potentially sustainable plan, policy, guideline, advocacy or activism model, relevant to an educational setting, broadly defined, and aimed at improving practice on a local, regional, national or international scale.

- Students may begin their studies on a part-time basis. However, they must register full-time for a minimum of two consecutive sessions, not including Summer, of on-campus study. Once enrolled full-time, students must maintain continuous registration full-time and pay full-time fees until all degree requirements, including the thesis, are completed.

Mode of Delivery: In person, Hybrid
Program Length: 4 years full-time (typical registration sequence: Continuous); 6 years part-time
Time Limit: 6 years full-time; 6 years part-time

Social Justice Education: Social Justice Education PhD

The **Doctor of Philosophy (PhD) degree program** is designed to provide opportunities for advanced study, original research, and theoretical analysis. The PhD program can be taken on a full-time or flexible-time basis. The Department of Social Justice Education (SJE) welcomes applicants with diverse, relevant backgrounds.

The flexible-time PhD degree is designed to accommodate demand by practising professionals for a PhD degree that permits continued employment in areas related to their areas of research. Degree requirements for the flexible-time and full-time PhD programs are the same. Flexible-time PhD students register full-time during the first four years and part-time during subsequent years of the program.

Delivery options: PhD programs are delivered in-person with the possibility of completing the program requirements through a hybrid delivery mode — students will experience a mix of modes of engagement with some of their coursework and other program requirements in-person, and between one-third and two-thirds of their coursework online.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the department's additional admission requirements stated below.
- PhD students who are admitted without sufficient previous study in a humanities, social science, or a cognate discipline may be required to take additional courses.
- Applicants must submit the following through the online application system; incomplete applications may be subject to processing delays or rejection:
  - A careful response to all Faculty questions in the online admissions application that demonstrates intellectual interests and concerns relevant to the humanities or social sciences, and social justice in education as well as reasons for undertaking a program in the department. Include a statement of preference for one or more faculty members whose research is best matched to the student's research interests.
  - Two letters of reference, preferably from university instructors with whom the applicant has studied or worked.
  - At least one sample of written work that demonstrates engagement with the humanities or social sciences, and social justice in education.
  - Resumé that provides clear and complete information about the applicant's work or field experience related to their proposed studies.

Completion Requirements

- **Coursework.** Students must complete **3.0 full-course equivalents (FCEs)** including:
  - Subject to consultation with a faculty advisor, SJE3905H *Interdisciplinary Approaches to Research: Theory and Praxis* is recommended. Additional courses may be required, and some students may be required to take other specified courses in research methods and/or theory.
  - At least 2.0 FCEs must be taken within SJE.
  - Students who are registered in an optional collaborative specialization may apply to have their SJE course requirement reduced by 0.5 FCE.
  - Students must consult with their faculty advisor before enrolling in any out-of-department course for which they wish to receive SJE credit.
- **Comprehensive examination**:
  - Students are encouraged to take, as part of their program requirements, one half course (0.5 FCE) focused on the substantive area on which they will be examined.
  - Students choose one of the following:
    - a major paper (30 to 40 pages); or
    - a substantive course outline (30 to 40 pages) for a topic of interest to the student within the area of social justice education; or
    - a solid draft of a scholarly article.
  - The option selected and the date for the comprehensive exam will be decided by the student and the supervisor. The comprehensive exam should be taken no later than the end of Year 3.
  - A student who fails the comprehensive exam will be permitted one additional attempt to pass. A second failure will result in the recommendation for termination of the student's registration.
  - Comprehensive exams will be graded on a pass or fail basis.
- Students must submit a **thesis** and defend it at a **Doctoral Final Oral Examination**. The thesis must embody the results of original investigation conducted by the student under the direction of an OISE thesis committee. The thesis must constitute a significant contribution to the knowledge of the field of study. The student must have an approved thesis topic, supervisor,

and an approved thesis committee by the end of Year 3, and must have completed all other program requirements.
- PhD students must register continuously and pay the full-time fee until all degree requirements have been fulfilled.
- Students cannot transfer between the full-time and flexible-time PhD options.
- Students cannot transfer between the EdD program and PhD programs.

Mode of Delivery: In person, Hybrid
Program Length: 4 years full-time
Time Limit: 6 years full-time

PhD Program (Flexible-Time)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the department's additional admission requirements stated below.
- PhD students who are admitted without sufficient previous study in a humanities, social science, or a cognate discipline may be required to take additional courses.
- Applicants must submit the following through the online application system; incomplete applications may be subject to processing delays or rejection:
  - A careful response to all Faculty questions in the online admissions application that demonstrates intellectual interests and concerns relevant to the humanities or social sciences, and social justice in education as well as reasons for undertaking a program in the department. Include a statement of preference for one or more faculty members whose research is best matched to the student's research interests
  - Two letters of reference, preferably from university instructors with whom the applicant has studied or worked
  - At least one sample of written work that demonstrates engagement with the humanities or social sciences, and social justice in education.
  - Resumé that provides clear and complete information about the applicant's work or field experience related to their proposed studies.
- Applicants must demonstrate that they are currently employed and are active professionals engaged in activities related to their proposed program of study.

Completion Requirements

- **Coursework.** Students must complete at least **3.0 full-course equivalents (FCEs)** including:
  - At least 2.0 FCEs taken in SJE, with the possibility to apply for a reduction of 0.5 FCE in the SJE course requirement if the student is also registered in an optional collaborative specialization.
  - Subject to consultation with a faculty advisor, SJE3905H *Interdisciplinary Approaches to Research: Theory and Praxis* is recommended.
  - Students must consult with their faculty advisor before enrolling in any out-of-department course for which they wish to receive SJE credit.
- **Comprehensive examination**:
  - Students are encouraged to take, as part of their program requirements, one half course (0.5 FCE) focused on the substantive area on which they will be examined.
  - Students choose one of the following:
    - a major paper (30 to 40 pages); or
    - a substantive course outline (30 to 40 pages) for a topic of interest to the student within the area of social justice education; or
    - a solid draft of a scholarly article.
  - The option selected and the date for the comprehensive exam will be decided by the student and the supervisor. The comprehensive exam should be taken no later than the end of Year 4.
  - A student who fails the comprehensive exam will be permitted one additional attempt to pass. A second failure will result in the recommendation for termination of the student's registration.
  - Comprehensive exams will be graded on a pass or fail basis.
- Students must submit a **thesis** and defend it at a **Doctoral Final Oral Examination**. The thesis must embody the results of original investigation conducted by the student under the direction of an OISE thesis committee. The thesis must constitute a significant contribution to the knowledge of the field of study. The student must have an approved thesis topic, supervisor, and an approved thesis committee by the end of Year 3, and must have completed all other program requirements.
- Students must register continuously until all degree requirements have been fulfilled. Students register full-time during the first four years and may continue as part-time thereafter, with their department's approval.
- Students cannot transfer between the full-time and flexible-time PhD options.
- Students cannot transfer between the EdD and PhD programs.

Mode of Delivery: In person, Hybrid
Program Length: 6 years full-time
Time Limit: 8 years full-time

Social Justice Education: Social Justice Education MA, MEd Courses

Not all courses are offered every year. Please consult the course schedule on the Registrar's Office and Student Experience website.

Master's Level

Course Code	Course Title
SJE1415H	Méthodologies narratives en éducation : récits, contre-récits, et récits alternatifs RM

Course Code	Course Title
SJE1418H	Sociologie de l'enfance, éducation, et inégalités entre élèves
SJE1900H	Introduction to Sociology in Education / Introduction à la sociologie de l'éducation
SJE1902H	Introductory Sociological Research Methods in Education
SJE1903H	Major Concepts and Issues in Social Justice Education
SJE1905H	Qualitative Research Methods for Social Justice
SJE1909H	Environmental Sustainability and Social Justice 1
SJE1912H	Foucault and Research in Education and Culture: Discourse, Power, and the Subject
SJE1919H	Advanced Topics in Environmental Justice Education
SJE1921Y	The Principles of Anti-Racism Education
SJE1922H	Sociology of Race and Ethnicity
SJE1923H	Racism, Violence, and the Law: Issues for Researchers and Educators
SJE1924H	Modernization, Development, and Education in African Contexts
SJE1925H	Indigenous Knowledge and Decolonization: Pedagogical Implications / Savoir indigène et décolonization
SJE1926H	Race, Space, and Citizenship: Research Methods
SJE1927H	Migration and Globalization
SJE1929H	Theorizing Asian Canada
SJE1930H	Race, Indigeneity, and the Colonial Politics of Recognition
SJE1931H	Centering Indigenous-Settler Solidarity in Theory and Research
SJE1932H	Decolonization, Settler Colonialism, and Antiblackness
SJE1933H	Participatory Action Research and Community Based Research
SJE1951H	The School and the Community / L'école, la participation parentale et la communauté
SJE1954H	Marginality and the Politics of Resistance
SJE1956H	Social Relations of Cultural Production in Education
SJE1957H	Disability Studies: An Introduction
SJE1958H	The Cultural Production of the Self as a Problem in Education
SJE1961H	Spirituality and Schooling
SJE1970H	Applied Ethics in Higher Education
SJE1971H	Identity and Education
SJE1972H	Contemporary Ethical Issues in Schooling and Education
SJE1973H	Liberalism and its Critics
SJE1974H	Truth Commissions Reconciliation and Indian Residential Schools
SJE1975H	Indigenous Settler Relations Issues for Teachers
SJE1976H	Critical Media Literacy Education
SJE1977H	Sociology of Indigenous and Alternative Approaches to Health and Healing Practices: Implications for Education
SJE1978H	Sexual, Racial, and Gender-Based Violence Prevention in Higher Education
SJE1979H	Race, Gender, and Empire in Socialist States
SJE1980H	Introduction to Research Methods for Social Justice: Master of Education
SJE1982H	Women, Diversity, and the Educational System
SJE1989H	Black Feminist Thought
SJE1993H	Militarism and Sustainability: Concepts of Nature, State, and Society
SJE2001Y	Major Research Paper
SJE2030H	Disability Studies and the Human Imaginary
SJE2040H	Encounters in Disability Studies
SJE2050H	Disability Studies Through Narrative Inquiry
SJE2929H	Disability Studies — Interpretive Methods — RM
SJE2941H	Bourdieu: Theory of Practice in Social Sciences
SJE2998H	Individual Reading and Research in Social Justice Education: Master's
SJE5000H to SJE5062H	Special Topics in Social Justice Research in Education: Master's Level
JTE1952H	Language, Culture, and Education / Langue, culture, et éducation

Social Justice Education: Social Justice Education EdD, PhD Courses

Not all courses are offered every year. Please consult the course schedule on the Registrar's Office and Student Experience website.

Doctoral Level

Course Code	Course Title
SJE1403H	History of Education in Canada
SJE1440H	An Introduction to Philosophy of Education
SJE1956H	Social Relations of Cultural Production in Education
SJE1979H	Race, Gender, and Empire in Socialist States
SJE1993H	Militarism and Sustainability: Concepts of Nature, State, and Society
SJE2929H	Disability Studies — Interpretive Methods — RM
SJE3417H	Critical, Feminist, and Radical Pedagogies
SJE3903H	SJE Learning to Succeed in Graduate School
SJE3905H	Interdisciplinary Approaches to Research: Theory and Praxis
SJE3911H	Cultural Knowledges, Representation, and Colonial Education
SJE3912H	Race and Knowledge Production: Research Methods
SJE3914H	Anti-Colonial Thought and Pedagogical Challenges
SJE3915H	Franz Fanon and Education
SJE3916H	Women in Leadership Positions: Intersectionalities and Leadership Practices; Sociological Implications in Education
SJE3917H	Indigenous Land Education and Black Geographies
SJE3933H	Globalisation and Transnationality: Feminist Perspectives
SJE3934H	Advanced Indigenous Feminist Research
SJE3935H	African Classics: Decolonial Thought in Education
SJE3997H	Practicum in Social Justice Education
SJE3998H	Individual Reading and Research in Sociology Justice Education
SJE5042Y	Special Topics in Social Justice Research in Education: Master's Level
SJE6000H to SJE6020H	Special Topics in Social Justice Research in Education: Doctoral Level
JSA5147H	Language, Nationalism, and Post-Nationalism

Social Work

Social Work: Introduction

Faculty Affiliation

Social Work

Degree Programs

Social Work

MSW

- Fields:
  - Children and Their Families;
  - Gerontology;
  - Health and Mental Health;
  - Human Services Management and Leadership;
  - Indigenous Trauma and Resiliency;
  - Social Justice and Diversity

PhD

Combined Degree Programs

- STG, Law, JD / MSW
- UTSC, Mental Health Studies (Specialist), HBSc / MSW
- UTSC, Mental Health Studies (Specialist Co-op), HBSc / MSW

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Addiction Studies**
  - Social Work, MSW, PhD
- **Aging, Palliative and Supportive Care Across the Life Course**
  - Social Work, MSW, PhD
- **Bioethics** (admissions have been administratively suspended)
  - Social Work, PhD
- **Community Development** (admissions have been administratively suspended)
  - Social Work, MSW
- **Contemporary East and Southeast Asian Studies**
  - Social Work, MSW
- **Ethnic, Immigration and Pluralism Studies**
  - Social Work, MSW, PhD
- **Health Services and Policy Research** (admissions have been administratively suspended)
  - Social Work, PhD
- **Public Health Policy** (admissions have been administratively suspended)
  - Social Work, MSW, PhD
- **Sexual Diversity Studies**
  - Social Work, MSW, PhD
- **Women and Gender Studies**
  - Social Work, MSW, PhD
- **Women's Health**
  - Social Work, MSW, PhD

Overview

As the oldest school of social work in Canada, the Factor-Inwentash Faculty of Social Work at the University of Toronto has been on the cutting edge of education, policy, research, and practice in social work for over 100 years. The Faculty offers a professional/academic program of study leading to **Master of Social Work (MSW)** and **Doctor of Philosophy (PhD)** degrees.

The mission of the Faculty at the University of Toronto has an international perspective that is influenced by its position within one of the top universities in North America located in a global metropolis. As such, the Faculty is committed to:

- Educating and developing professionals who have the capacity to engage in and influence our changing world through social work practice, policy, and research.
- Advancing research, practice, and policy that shapes the future of a profession that crosses national boundaries.
- Providing leadership by mobilizing knowledge that incorporates the range of expertise existing within the broader social work communities that exist internationally.
- Collaborating with our diverse partners to address social inequities at local, national, and global levels.

Contact and Address

Web: socialwork.utoronto.ca
Email: admissions.fsw@utoronto.ca
Telephone: (416) 978-6314
Fax: (416) 978-7072

Factor-Inwentash Faculty of Social Work
University of Toronto, 246 Bloor Street West
Toronto, Ontario M5S 1V4 Canada

Social Work: Graduate Faculty

Full Members

Alaggia, Ramona - BA, MSW, PhD
Ashcroft, Rachelle - MSW, PhD
Bhuyan, Rupaleem - BA, MA, PhD ***(Director, PhD Program)***
Brennan, David - BA, MSW, PhD ***(Associate Dean, Research)***
Burnes, David - MSW, PhD
Craig, Shelley - BS, MSW, PhD
Fallon, Barbara - BA, MSW, PhD
Fang, Lin - BA, MSW, PhD
Fuller-Thomson, Esme - BA, MSW, PhD
Grenier, Amanda - MSW, PhD
Hulchanski, J. David - BA, MSc, PhD

King, Bryn - MSW, PhD
Lee, Eunjung - BSW, MSW, PhD ***(Associate Dean, Academic)***
Logie, Carmen - BA, MSW, PhD
Mishna, Faye - BA, PhD
Newman, Peter - BA, MA, MSW, PhD
Regehr, Cheryl - AB, MA, PhD
Saini, Michael - BA, BA, BSW, MSW, PhD
Sakamoto, Izumi - DSW
Sharpe, Tanya - BA, MSW, PhD
Shier, Micheal - MSW, PhD ***(Director, MSW Program)***
Trocme, Nicolas - PhD
Tsang, Ka Tat - BSc, PhD
Williams, Charmaine - BA, BSc, MSW, PhD ***(Dean)***
Xue, Jia - BCL, MA, PhD
Zuberi, Daniyal - BA, MSc, PhD

Members Emeriti

Bellamy, Donald - BA, BSW, MSW, DSW
Breton, Margot - BA, MSW
George, Usha - BSc, BEd, MA, MA, PhD
Irving, Howard - BS, MSW, DSW
Litvack, Andrea - BSW, MSW
Marziali, Elsa - BA, MSW, DSW
McDonald, Lynn - PhD
Neysmith, Sheila - BSc, MSW, DSW
Schlesinger, Benjamin - BA, MSW, PhD
Shapiro, Ben - BA, BSW, MSW, DSW
Wells, Lilian - BA, BA, BSW, MSW

Associate Members

Adamson, Keith - MSW, PhD
Begun, Stephanie - MSW, PhD
Black, Tara - PhD
Collin-Vezina, Delphine - BS, PhD
Daley, Andrea - PhD
Davison, Karen - PhD
Esposito, Tonino - MSW, PhD
Ferrer, Ilyan - MSW, DPhil
Fleischer, Les - BA, MSW, DSW
Fluke, John - PhD
Fu, Qiufang - MS, PhD
Gassoumis, Zachary - PhD
Graham, John R. - PhD
Hanley, Jill - PhD
Helie, Sonia - MS, PhD
Herie, Marilyn - BA, MSW, PhD
Ickowicz, Abel - MD
James, Carl Everton - MA, PhD
Katz, Ellen - BA, MSW, PhD
Levenson, Jill S. - PhD
Litvack, Andrea - BSW, MSW
MacDonald, Judy E. - PhD
Massaquoi, Notisha - BA, MA, PhD
McNeill, Ted - BA, MSc, DPhil
Muskat, Barbara - BSW, MSW, PhD
Nicholas, David - BSW, MSW, DPhil
Parada, Henry - PhD
Peterson, Zoe - MA, PhD
Quinn, Ashley - BSc, MSW, PhD
Rothwell, David - PhD
Sheppard, Christine - MSW, PhD
Taylor, Harry - MSW, PhD
Teixeira, Samantha - PhD
Wadley, James - MS, PhD
Yan, Miu Chung - PhD

Social Work: Social Work MSW

The **Master of Social Work (MSW) program** is distinguished by the integration of research and practice in both the classroom and its practicum education. The program offers six fields of specialization:

- Children and Their Families
- Gerontology
- Health and Mental Health
- Human Services Management and Leadership
- Indigenous Trauma and Resiliency
- Social Justice and Diversity

It is fully accredited by the Canadian Association for Social Work Education.

The Faculty of Social Work offers the MSW program in a two-year option or an advanced-standing option for applicants entering with a Bachelor of Social Work (BSW) degree, in all fields of specialization except Indigenous Trauma and Resiliency (two-year option only).

All students are expected to graduate with an advanced level of knowledge and professional competence in a chosen area of social work practice.

Social Work: Social Work MSW; Field: Children and Their Families

Within the MSW degree program, the field in Children and Their Families is designed to prepare students for social work practice with children and their families at all levels of intervention, from individual to group work with children, to family and couple intervention, to community organization, and to program and policy development.

MSW Program; Field: Children and Their Families (Two-Year Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Social Work's additional admission requirements stated below.
- Applicants with an **appropriate bachelor's degree** with a minimum average equivalent to at least a University of Toronto mid-B in the final year of full-time study from a recognized university are admitted to a two-year MSW program.
- All applicants must have included 3.0 full-course equivalents (FCEs) in social science courses, including 0.5 FCE in research methodology. A mid-B is strongly recommended in the research methodology course.

- Experience (voluntary or paid) in the social services or related field and knowledge of critical social issues are recommended. Suitability for professional practice in social work will also be considered.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Initial admission inquiries should be made directly to the Faculty of Social Work. Please note that applicants holding the minimum admission requirements are not guaranteed admission. All admission decisions are final.

Completion Requirements

- **Students in the MSW two-year option** must declare their field by mid-February of Year 1.
- **Coursework.** Students must successfully complete a total of **8.5 FCEs** as follows:
  - Year 1 core courses and practicum (4.5 FCEs):
    - SWK1999H *Equity, Diversity, and Inclusion Workshop* to be completed in the Fall session
    - SWK4102H *Social Policy and Social Welfare in the Canadian Context*
    - SWK4103H *Elements of Social Work Practice*
    - SWK4105H *Social Work Practice Laboratory*
    - SWK4107H *Foundations of Social Work: Knowledge, Theory, and Values that Inform Practice*
    - SWK4510H *Research for Evidence-Based Social Work Practice,* which must be completed before taking any of the research courses in the field
    - SWK4602H *Social Work Practice with Groups*
    - SWK4605H *Social Work Practice with Individuals and Families*
    - SWK4654H *Social Work Practice in Organizations and Communities*
    - SWK4701H *Social Work Practicum I*.
  - Year 2 field-specific courses and practicum (3.0 FCEs):
    - SWK4514H *Research for Practice with Children and Their Families*
    - SWK4608H *Social Work Practice with Families*
    - SWK4620H *Social Work Practice with Children and Adolescents*
    - SWK4625H *The Intersection of Policy and Practice with Children and Their Families*
    - SWK4702Y *Social Work Practicum II* (September to April).
  - 1.0 FCE in elective courses.
  - Students in the **thesis option** must complete a total of **8.5 FCEs** in coursework, including the 4.5 FCEs in core courses and practicum, 3.0 FCEs in field-specific courses and practicum, and 1.0 FCE in the thesis (replaces 1.0 FCE in elective courses).
    - The MSW thesis option provides hands-on research experience. The thesis is an independent piece of research intended to enable students to develop and apply research skills within the context of social work practice and to write a graduate thesis of publishable quality. Note: The thesis option is available to a limited number of students - maximum three in any given year - whose proposed research must be approved by a review panel and by the Associate Dean, Research.
    - Students in the thesis option who have a minimum of two years prior full-time social work experience are eligible to apply to take an additional 1.0 elective FCE in place of the Year 2 practicum (SWK4702Y). Workplace supervision must have occurred with an MSW supervisor; requests for substitution must be reviewed and approved by the Faculty Assessment Committee.
    - Students who choose the thesis option may require at least one additional academic session to complete the program.
  - **All MSW students**: Agencies that offer practica will likely require a Vulnerable Sector Verification prior to commencing the practicum. Failure to pass this check will jeopardize a student's entry to practicum. Cost and time factors are associated with the Vulnerable Sector Verification. A delay in obtaining the results can impact the start time of a student's practicum. In anticipation of this requirement for the practicum, it is strongly recommended that students begin this process early.
  - In the event that a student does not complete two or more required courses, or receives an FZ (inadequate) after repeating any course, normally steps will be taken by the Faculty to recommend the termination of the student's registration.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

MSW Program; Field: Children and Their Families (Advanced-Standing Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Social Work's additional admission requirements stated below.
- Applicants who hold a **BSW degree** with mid-B average in the final year of full-time study, or its equivalent from a recognized university, may be eligible for the MSW advanced-standing option.
- All applicants must have included 3.0 full-course equivalents (FCEs) in social science courses, including 0.5 FCE in research methodology. A mid-B is strongly recommended in the research methodology course.
- Experience (voluntary or paid) in the social services or related field and knowledge of critical social issues are recommended. Suitability for professional practice in social work will also be considered.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements. Advanced-standing applicants must declare their field and a preference for full-time or part-time studies at the time of application.

- Initial admission inquiries should be made directly to the Faculty of Social Work. Please note that applicants holding the minimum admission requirements are not guaranteed admission. All admission decisions are final.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **4.5 FCEs** as follows:
  - Field-specific courses and practicum (3.5 FCEs):
    - SWK1999H *Equity, Diversity, and Inclusion Workshop* to be completed in the Fall session)
    - SWK4510H *Research for Evidence-Based Social Work Practice*, which must be completed before taking any of the research courses in the field
    - SWK4514H *Research for Practice with Children and Their Families*
    - SWK4608H *Social Work Practice with Families*
    - SWK4620H *Social Work Practice with Children and Adolescents*
    - SWK4625H *The Intersection of Policy and Practice with Children and Their Families*
    - SWK4702Y *Social Work Practicum II*.
  - 1.0 FCE in elective courses.
  - Students in the **thesis option** must complete a total of **4.5 FCEs** in coursework, including the 3.5 FCEs in field-specific courses and practicum, and 1.0 FCE in the thesis (replaces 1.0 FCE in elective courses).
    - The MSW thesis option provides hands-on research experience. The thesis is an independent piece of research intended to enable students to develop and apply research skills within the context of social work practice and to write a graduate thesis of publishable quality. Note: The thesis option is available to a limited number of students — maximum three in any given year — whose proposed research must be approved by a review panel and by the Associate Dean, Research.
    - Students in the thesis option who have a minimum of two years prior full-time social work experience are eligible to apply to take an additional 1.0 elective FCE in place of the Year 2 practicum (SWK4702Y). Workplace supervision must have occurred with an MSW supervisor; requests for substitution must be reviewed and approved by the Faculty Assessment Committee.
    - Students who choose the thesis option may require at least one additional academic session to complete the program.
- **All MSW students**: Agencies that offer practica will likely require a Vulnerable Sector Verification prior to commencing the practicum. Failure to pass this check will jeopardize a student's entry to practicum. Cost and time factors are associated with the Vulnerable Sector Verification. A delay in obtaining the results can impact the start time of a student's practicum. In anticipation of this requirement for the practicum, it is strongly recommended that students begin this process early.
- In the event that a student does not complete two or more required courses, or receives an FZ (inadequate) after repeating any course, normally steps will be taken by the Faculty to recommend the termination of the student's registration.
- Note: advanced-standing students normally complete the program in one year of full-time study (three sessions) or two years of part-time study.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Social Work: Social Work MSW; Field: Gerontology

Social workers provide a wide variety of services and programs, both in the community and in institutions that are aimed at enhancing the quality of life of older people and assisting families to adjust to the aging of their family member. Social workers also play a vital role in the development and implementation of social and economic policies at the provincial and national levels through research on aging, consultation with government, and through social advocacy.

All students enrolled in the Social Work in Gerontology field will automatically be enrolled in the Collaborative Specialization in Aging, Palliative and Supportive Care Across the Life Course.

MSW Program; Field: Gerontology (Two-Year Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Social Work's additional admission requirements stated below.
- Applicants with an **appropriate bachelor's degree** with a minimum average equivalent to at least a University of Toronto mid-B in the final year of full-time study from a recognized university are admitted to a two-year MSW program.
- All applicants must have included 3.0 full-course equivalents (FCEs) in social science courses, including 0.5 FCE in research methodology. A mid-B is strongly recommended in the research methodology course.
- Experience (voluntary or paid) in the social services or related field and knowledge of critical social issues are recommended. Suitability for professional practice in social work will also be considered.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Initial admission inquiries should be made directly to the Faculty of Social Work. Please note that applicants holding the minimum admission requirements are not guaranteed admission. All admission decisions are final.

Completion Requirements

- **Students in the MSW two-year option** must declare their field by mid-February of Year 1.

- **Coursework.** Students must successfully complete a total of **8.5 FCEs** as follows:
  - Year 1 core courses and practicum (4.5 FCEs):
    - SWK1999H *Equity, Diversity, and Inclusion Workshop* to be completed in the Fall session
    - SWK4102H *Social Policy and Social Welfare in the Canadian Context*
    - SWK4103H *Elements of Social Work Practice*
    - SWK4105H *Social Work Practice Laboratory*
    - SWK4107H *Foundations of Social Work: Knowledge, Theory, and Values that Inform Practice*
    - SWK4510H *Research for Evidence-Based Social Work Practice*, which must be completed before taking any of the research courses in the field
    - SWK4602H *Social Work Practice with Groups*
    - SWK4605H *Social Work Practice with Individuals and Families*
    - SWK4654H *Social Work Practice in Organizations and Communities*
    - SWK4701H *Social Work Practicum I*.
  - Year 2 field-specific courses and practicum (3.5 FCEs):
    - AGE2000H *Principles of Aging*
    - SWK4513H *Knowledge Building in Social Work*
    - SWK4609H *Clinical Social Work Practice with Older Adults*
    - SWK4611H *The Context of Social Work Practice with Older Adults and Their Families*
    - SWK4618H *Special Issues in Gerontological Social Work*
    - SWK4702Y *Social Work Practicum II*.
  - Elective coursework (0.5 FCEs) from the Collaborative Specialization (CS) in Aging, Palliative and Supportive Care Across the Life Course list of approved electives, excluding SWK4618H. To fulfil the elective requirement, students may request approval in advance from the CS Committee of an elective course not on this list.
  - Students in the **thesis option** must complete a total of **8.5 FCEs** in coursework, including the 4.5 FCEs in core courses and practicum, 2.5 FCEs in field-specific courses, 0.5 FCE in elective coursework, and 1.0 FCE in the thesis (replaces 1.0 FCE in practicum).
    - The MSW thesis option provides hands-on research experience. The thesis is an independent piece of research intended to enable students to develop and apply research skills within the context of social work practice and to write a graduate thesis of publishable quality. Note: The thesis option is available to a limited number of students — maximum three in any given year — whose proposed research must be approved by a review panel and by the Associate Dean, Research.
    - Students in the thesis option who have a minimum of two years prior full-time social work experience are eligible to apply to take an additional 1.0 elective FCE in place of the Year 2 practicum (SWK4702Y). Workplace supervision must have occurred with an MSW supervisor; requests for substitution must be reviewed and approved by the Faculty Assessment Committee.
    - Students who choose the thesis option may require at least one additional academic session to complete the program.
- **All MSW students**: Agencies that offer practica will likely require a Vulnerable Sector Verification prior to commencing the practicum. Failure to pass this check will jeopardize a student's entry to practicum. Cost and time factors are associated with the Vulnerable Sector Verification. A delay in obtaining the results can impact the start time of a student's practicum. In anticipation of this requirement for the practicum, it is strongly recommended that students begin this process early.
- In the event that a student does not complete two or more required courses, or receives an FZ (inadequate) after repeating any course, normally steps will be taken by the Faculty to recommend the termination of the student's registration.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

MSW Program; Field: Gerontology (Advanced-Standing Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Social Work's additional admission requirements stated below.
- Applicants who hold a BSW degree with mid-B average in the final year of full-time study, or its equivalent from a recognized university, may be eligible for the MSW advanced-standing option.
- All applicants must have included 3.0 full-course equivalents (FCEs) in social science courses, including 0.5 FCE in research methodology. A mid-B is strongly recommended in the research methodology course.
- Experience (voluntary or paid) in the social services or related field and knowledge of critical social issues are recommended. Suitability for professional practice in social work will also be considered.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Advanced-standing applicants must declare their field and a preference for full-time or part-time studies at the time of application.
- Initial admission inquiries should be made directly to the Faculty of Social Work. Please note that applicants holding the minimum admission requirements are not guaranteed admission. All admission decisions are final.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **4.5 FCEs** as follows:
  - Field-specific courses and practicum (4.0 FCEs):
    - AGE2000H *Principles of Aging*
    - SWK1999H *Equity, Diversity, and Inclusion Workshop* to be completed in the Fall session
    - SWK4510H *Research for Evidence-Based Social Work Practice*, which must be completed before taking any of the research courses in the field
    - SWK4513H *Knowledge Building in Social Work*
    - SWK4609H *Clinical Social Work Practice with Older Adults*
    - SWK4611H *The Context of Social Work Practice with Older Adults and Their Families*
    - SWK4618H *Special Issues in Gerontological Social Work*
    - SWK4702Y *Social Work Practicum II*.
  - Elective coursework (0.5 FCEs) from the Collaborative Specialization (CS) in Aging, Palliative and Supportive Care Across the Life Course list of approved electives, excluding SWK4618H. To fulfil the elective requirement, students may request approval in advance from the CS Committee of an elective course not on this list.
  - Students in the **thesis option** must complete a total of **4.5 FCEs** in coursework, including the 3.0 FCEs in field-specific courses, 0.5 FCE in elective coursework, and 1.0 FCE in the thesis (replaces 1.0 FCE in practicum).
    - The MSW thesis option provides hands-on research experience. The thesis is an independent piece of research intended to enable students to develop and apply research skills within the context of social work practice and to write a graduate thesis of publishable quality. Note: The thesis option is available to a limited number of students — maximum three in any given year — whose proposed research must be approved by a review panel and by the Associate Dean, Research.
    - Students in the thesis option who have a minimum of two years prior full-time social work experience are eligible to apply to take an additional 1.0 elective FCE in place of the Year 2 practicum (SWK4702Y). Workplace supervision must have occurred with an MSW supervisor; requests for substitution must be reviewed and approved by the Faculty Assessment Committee.
    - Students who choose the thesis option may require at least one additional academic session to complete the program.
- **All MSW students**: Agencies that offer practica will likely require a Vulnerable Sector Verification prior to commencing the practicum. Failure to pass this check will jeopardize a student's entry to practicum. Cost and time factors are associated with the Vulnerable Sector Verification. A delay in obtaining the results can impact the start time of a student's practicum. In anticipation of this requirement for the practicum, it is strongly recommended that students begin this process early.
- In the event that a student does not complete two or more required courses, or receives an FZ (inadequate) after repeating any course, normally steps will be taken by the Faculty to recommend the termination of the student's registration.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Social Work: Social Work MSW; Field: Health and Mental Health

As members of inter-professional health teams, social workers seek to assist others in understanding the social and community context in which physical and mental illness occur, and the way in which these larger systems contribute to the development of illness and disability and exacerbate or ameliorate the challenges in adapting to illness and living with disability.

MSW Program; Field: Health and Mental Health (Two-Year Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Social Work's additional admission requirements stated below.
- Applicants with an **appropriate bachelor's degree** with a minimum average equivalent to at least a University of Toronto mid-B in the final year of full-time study from a recognized university are admitted to a two-year MSW program.
- All applicants must have included 3.0 full-course equivalents (FCEs) in social science courses, including 0.5 FCE in research methodology. A mid-B is strongly recommended in the research methodology course.
- Experience (voluntary or paid) in the social services or related field and knowledge of critical social issues are recommended. Suitability for professional practice in social work will also be considered.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Initial admission inquiries should be made directly to the Faculty of Social Work. Please note that applicants holding the minimum admission requirements are not guaranteed admission. All admission decisions are final.

Completion Requirements

- **Students in the MSW two-year option** must declare their field by mid-February of Year 1.
- **Coursework.** Students must successfully complete a total of **8.5 FCEs** as follows:
  - Year 1 core courses and practicum (4.5 FCEs):

        - SWK1999H *Equity, Diversity, and Inclusion Workshop* to be completed in the Fall session
        - SWK4102H *Social Policy and Social Welfare in the Canadian Context*
        - SWK4103H *Elements of Social Work Practice*
        - SWK4105H *Social Work Practice Laboratory*
        - SWK4107H *Foundations of Social Work: Knowledge, Theory, and Values that Inform Practice*
        - SWK4510H *Research for Evidence-Based Social Work Practice*, which must be completed before taking any of the research courses in the field
        - SWK4602H *Social Work Practice with Groups*
        - SWK4605H *Social Work Practice with Individuals and Families*
        - SWK4654H *Social Work Practice in Organizations and Communities*
        - SWK4701H *Social Work Practicum I*
    - Year 2 field-specific courses and practicum (2.0 FCEs):
        - SWK4412H *The Context of Mental Health and Health Practice*
        - SWK4511H *Practice-Based Research in Mental Health and Health*
        - SWK4702Y *Social Work Practicum II* (September to April)
    - 1.0 FCE in field-specific courses selected from one of the following options:
        - SWK4622H *Social Work Practice in Health* **and** SWK4604H *Social Work Practice in Mental Health*
        - SWK4622H *Social Work Practice in Health*, **and one** of the following:
            - SWK4000H *Social Work and Disability Practice: a Client and Family Centred Approach* **or**
            - SWK4615H *Cognitive Behavioural Theories and Clinical Social Work Practice* **or**
            - SWK4632H *Advanced Social Work Practice in Health* **or**
        - SWK4604H *Social Work Practice in Mental Health*, **and one** of the following:
            - SWK4001H *Emotion-Focused Therapy* **or**
            - SWK4003H *Narrative Therapy* **or**
            - SWK4615H *Cognitive Behavioural Theories and Clinical Social Work Practice* **or**
            - SWK4626H *Social Work Practice with LGBTIA Populations* **or**
            - SWK4627H *Eating Disorders Assessment and Treatment* **or**
            - SWK4631H *Advanced Social Work Practice in Mental Health* **or**
            - SWK4647H *Family-Centred Practices in Addictions and Mental Health*
    - 1.0 FCE in elective courses.
    - Students in the **thesis option** must complete a total of **8.5 FCEs** in coursework, including the 4.5 FCEs in core courses and practicum, 2.0 FCEs in field-specific courses and practicum, 1.0 FCE in field-specific courses selected from one of the options described above, and 1.0 FCE in the thesis (replaces 1.0 FCE in elective courses).
        - The MSW thesis option provides hands-on research experience. The thesis is an independent piece of research intended to enable students to develop and apply research skills within the context of social work practice and to write a graduate thesis of publishable quality. Note: The thesis option is available to a limited number of students — maximum three in any given year — whose proposed research must be approved by a review panel and by the Associate Dean, Research.
        - Students in the thesis option who have a minimum of two years prior full-time social work experience are eligible to apply to take an additional 1.0 elective FCE in place of the Year 2 practicum (SWK4702Y). Workplace supervision must have occurred with an MSW supervisor; requests for substitution must be reviewed and approved by the Faculty Assessment Committee.
        - Students who choose the thesis option may require at least one additional academic session to complete the program.
    - **All MSW students**: Agencies that offer practica will likely require a Vulnerable Sector Verification prior to commencing the practicum. Failure to pass this check will jeopardize a student's entry to practicum. Cost and time factors are associated with the Vulnerable Sector Verification. A delay in obtaining the results can impact the start time of a student's practicum. In anticipation of this requirement for the practicum, it is strongly recommended that students begin this process early.
    - In the event that a student does not complete two or more required courses, or receives an FZ (inadequate) after repeating any course, normally steps will be taken by the Faculty to recommend the termination of the student's registration.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

MSW Program; Field: Health and Mental Health (Advanced-Standing Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Social Work's additional admission requirements stated below.
- Applicants who hold a **BSW degree** with mid-B average in the final year of full-time study, or its equivalent from a recognized university, may be eligible for the MSW advanced-standing option.
- All applicants must have included 3.0 full-course equivalents (FCEs) in social science courses, including 0.5 FCE in research methodology. A mid-B is strongly recommended in the research methodology course.
- Experience (voluntary or paid) in the social services or related field and knowledge of critical social issues are recommended. Suitability for professional practice in social work will also be considered.

- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Advanced-standing applicants must declare their field and a preference for full-time or part-time studies at the time of application.
- Initial admission inquiries should be made directly to the Faculty of Social Work. Please note that applicants holding the minimum admission requirements are not guaranteed admission. All admission decisions are final.

Completion Requirements

- **Coursework.** Students must complete a total of **4.5 full-course equivalents (FCEs)** in coursework, as follows:
  - Field-specific courses and practicum (2.5 FCEs):
    - SWK1999H *Equity, Diversity, and Inclusion Workshop* to be completed in the Fall session
    - SWK4412H *The Context of Mental Health and Health Practice*
    - SWK4511H *Practice-Based Research in Mental Health and Health*
    - SWK4702Y *Social Work Practicum II* (September to April)
    - SWK4510H *Research for Evidence-Based Social Work Practice*, which must be completed before taking any of the research courses in the field.
  - 1.0 FCE in field-specific courses selected from one of the following options:
    - SWK4622H *Social Work Practice in Health* **and** SWK4604H *Social Work Practice in Mental Health*
    - SWK4622H *Social Work Practice in Health*, **and one** of the following:
      - SWK4000H *Social Work and Disability Practice: a Client and Family Centred Approach* **or**
      - SWK4615H *Cognitive Behavioural Theories and Clinical Social Work Practice* **or**
      - SWK4632H *Advanced Social Work Practice in Health*
    - SWK4604H *Social Work Practice in Mental Health*, **and one** of the following:
      - SWK4001H *Emotion-Focused Therapy* **or**
      - SWK4003H *Narrative Therapy* **or**
      - SWK4615H *Cognitive Behavioural Theories and Clinical Social Work Practice* **or**
      - SWK4626H *Social Work Practice with LGBTQIA Populations* **or**
      - SWK4627H *Eating Disorders Assessment and Treatment* **or**
      - SWK4631H *Advanced Social Work Practice in Mental Health* **or**
      - SWK4647H *Family-Centred Practices in Addictions and Mental Health*
  - 1.0 FCE in elective courses.
  - Students in the **thesis option** must complete a total of **4.5 FCEs** in coursework, including the 2.5 FCEs in field-specific courses and practicum, 1.0 FCE in field-specific courses selected from one of the options described above, and 1.0 FCE in the thesis (replaces 1.0 FCE in elective courses).
    - The MSW thesis option provides hands-on research experience. The thesis is an independent piece of research intended to enable students to develop and apply research skills within the context of social work practice and to write a graduate thesis of publishable quality. Note: The thesis option is available to a limited number of students — maximum three in any given year — whose proposed research must be approved by a review panel and by the Associate Dean, Research.
    - Students in the thesis option who have a minimum of two years prior full-time social work experience are eligible to apply to take an additional 1.0 elective FCE in place of the Year 2 practicum (SWK4702Y). Workplace supervision must have occurred with an MSW supervisor; requests for substitution must be reviewed and approved by the Faculty Assessment Committee.
    - Students who choose the thesis option may require at least one additional academic session to complete the program.
  - **All MSW students**: Agencies that offer practica will likely require a Vulnerable Sector Verification prior to commencing the practicum. Failure to pass this check will jeopardize a student's entry to practicum. Cost and time factors are associated with the Vulnerable Sector Verification. A delay in obtaining the results can impact the start time of a student's practicum. In anticipation of this requirement for the practicum, it is strongly recommended that students begin this process early.
  - In the event that a student does not complete two or more required courses, or receives an FZ (inadequate) after repeating any course, normally steps will be taken by the Faculty to recommend the termination of the student's registration.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Social Work: Social Work MSW; Field: Human Services Management and Leadership

The not-for-profit sector is primarily responsible for the delivery of social services in Canada. There is a critical need for people who are able to assume leadership roles in the community social services sector.

MSW Program; Field: Human Services Management and Leadership (Two-Year Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Social Work's additional admission requirements stated below.
- Applicants with an **appropriate bachelor's degree** with a minimum average equivalent to at least a University of Toronto mid-B in the final year of full-time study from a recognized university are admitted to a two-year MSW program.
- All applicants must have included 3.0 full-course equivalents (FCEs) in social science courses, including 0.5 FCE in research methodology. A mid-B is strongly recommended in the research methodology course.
- Experience (voluntary or paid) in the social services or related field and knowledge of critical social issues are recommended. Suitability for professional practice in social work will also be considered.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Initial admission inquiries should be made directly to the Faculty of Social Work. Please note that applicants holding the minimum admission requirements are not guaranteed admission. All admission decisions are final.

Completion Requirements

- **Students in the MSW two-year option** must declare their field by mid-February of Year 1.
- **Coursework.** Students must successfully complete a total of **8.5 FCEs** as follows:
  - Year 1 core courses and practicum (4.5 FCEs):
    - SWK1999H *Equity, Diversity, and Inclusion Workshop* to be completed in the Fall session
    - SWK4102H *Social Policy and Social Welfare in the Canadian Context*
    - SWK4103H *Elements of Social Work Practice*
    - SWK4105H *Social Work Practice Laboratory*
    - SWK4107H *Foundations of Social Work: Knowledge, Theory, and Values that Inform Practice*
    - SWK4510H *Research for Evidence-Based Social Work Practice*, which must be completed before taking any of the research courses in the field
    - SWK4602H *Social Work Practice with Groups*
    - SWK4605H *Social Work Practice with Individuals and Families*
    - SWK4654H *Social Work Practice in Organizations and Communities*
    - SWK4701H *Social Work Practicum I*.
  - Year 2 field-specific courses and practicum (3.0 FCEs):
    - SWK4425H *Human Services Management and Leadership*
    - SWK4426H *Financial Management and Leadership in Human Service Organizations*
    - SWK4427H *Human Resource Management in Human Service Organizations*
    - SWK4515H *Research and Quality Improvement in Human Service Organizations*
    - SWK4702Y *Social Work Practicum II* (September to April)
  - 1.0 FCE in elective courses.
  - Students in the **thesis option** must complete a total of **8.5 FCEs** in coursework, including the 4.5 FCEs in core courses and practicum, 3.0 FCEs in field-specific courses and practicum, and 1.0 FCE in the thesis (replaces 1.0 FCE in elective courses).
    - The MSW thesis option provides hands-on research experience. The thesis is an independent piece of research intended to enable students to develop and apply research skills within the context of social work practice and to write a graduate thesis of publishable quality. Note: The thesis option is available to a limited number of students — maximum three in any given year — whose proposed research must be approved by a review panel and by the Associate Dean, Research.
    - Students in the thesis option who have a minimum of two years prior full-time social work experience are eligible to apply to take an additional 1.0 elective FCE in place of the Year 2 practicum (SWK4702Y). Workplace supervision must have occurred with an MSW supervisor; requests for substitution must be reviewed and approved by the Faculty Assessment Committee.
    - Students who choose the thesis option may require at least one additional academic session to complete the program.
- **All MSW students**: Agencies that offer practica will likely require a Vulnerable Sector Verification prior to commencing the practicum. Failure to pass this check will jeopardize a student's entry to practicum. Cost and time factors are associated with the Vulnerable Sector Verification. A delay in obtaining the results can impact the start time of a student's practicum. In anticipation of this requirement for the practicum, it is strongly recommended that students begin this process early.
- In the event that a student does not complete two or more required courses, or receives an FZ (inadequate) after repeating any course, normally steps will be taken by the Faculty to recommend the termination of the student's registration.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

MSW Program; Field: Human Services Management and Leadership (Advanced-Standing Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Social Work's additional admission requirements stated below.
- Applicants who hold a **BSW degree** with mid-B average in the final year of full-time study, or its equivalent from a recognized university, may be eligible for the MSW advanced-standing option.
- All applicants must have included 3.0 full-course equivalents (FCEs) in social science courses, including 0.5 FCE in research methodology. A mid-B is strongly recommended in the research methodology course.
- Experience (voluntary or paid) in the social services or related field and knowledge of critical social issues are recommended. Suitability for professional practice in social work will also be considered.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Advanced-standing applicants must declare their field and a preference for full-time or part-time studies at the time of application.
- Initial admission inquiries should be made directly to the Faculty of Social Work. Please note that applicants holding the minimum admission requirements are not guaranteed admission. All admission decisions are final.

Completion Requirements

- **Coursework.** Students must complete a total of **4.5 full-course equivalents (FCEs)** in coursework, as follows:
  - Field-specific courses and practicum (3.5 FCEs):
    - SWK1999H *Equity, Diversity, and Inclusion Workshop* to be completed in the Fall session
    - SWK4425H *Human Services Management and Leadership*
    - SWK4426H *Financial Management and Leadership in Human Service Organizations*
    - SWK4427H *Human Resource Management in Human Service Organizations*
    - SWK4510H *Research for Evidence-Based Social Work Practice*, which must be completed before taking any of the research courses in the field
    - SWK4515H *Research and Quality Improvement in Human Service Organizations*
    - SWK4702Y *Social Work Practicum II*.
  - 1.0 FCE in elective courses.
  - Students in the **thesis option** must complete a total of **4.5 FCEs** in coursework, including the 3.5 FCEs in field-specific courses and practicum, and 1.0 FCE in the thesis (replaces 1.0 FCE in elective courses).
    - The MSW thesis option provides hands-on research experience. The thesis is an independent piece of research intended to enable students to develop and apply research skills within the context of social work practice and to write a graduate thesis of publishable quality. Note: The thesis option is available to a limited number of students — maximum three in any given year — whose proposed research must be approved by a review panel and by the Associate Dean, Research.
    - Students in the thesis option who have a minimum of two years prior full-time social work experience are eligible to apply to take an additional 1.0 elective FCE in place of the Year 2 practicum (SWK4702Y). Workplace supervision must have occurred with an MSW supervisor; requests for substitution must be reviewed and approved by the Faculty Assessment Committee.
    - Students who choose the thesis option may require at least one additional academic session to complete the program.
- **All MSW students**: Agencies that offer practica will likely require a Vulnerable Sector Verification prior to commencing the practicum. Failure to pass this check will jeopardize a student's entry to practicum. Cost and time factors are associated with the Vulnerable Sector Verification. A delay in obtaining the results can impact the start time of a student's practicum. In anticipation of this requirement for the practicum, it is strongly recommended that students begin this process early.
- In the event that a student does not complete two or more required courses, or receives an FZ (inadequate) after repeating any course, normally steps will be taken by the Faculty to recommend the termination of the student's registration.
- Note: advanced-standing students normally complete the program in one year of full-time study (three sessions) or two years of part-time study.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Social Work: Social Work MSW; Field: Indigenous Trauma and Resiliency

The Indigenous Trauma and Resiliency field integrates theory and research drawn from social work and Indigenous knowledge for application in the delivery of services and interventions for Indigenous populations. There is an emphasis on the First Nations, Métis, and Inuit peoples of Canada and other Indigenous groups. The curriculum is offered through online and intensive classroom formats.

Initial admission inquiries should be made directly to the Factor-Inwentash Faculty of Social Work. Applicants holding the minimum admission requirements are not guaranteed admission. All admission decisions are final.

This field is offered only as a two-year, full-time program.

MSW Program; Field: Indigenous Trauma and Resiliency

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Factor-Inwentash Faculty of Social Work's additional admission requirements stated below.
- Applicants with an appropriate bachelor's degree or Bachelor of Social Work (BSW) degree with a minimum average equivalent to at least a University of Toronto mid-B in the final year of full-time study from a recognized university can be admitted to this field.
- All applicants must have completed 3.0 full-course equivalents (FCEs) in social science courses, including 0.5 FCE in research methodology. A mid-B is strongly recommended in the research methodology course.
- Three years of experience (voluntary or paid) in the social services or related field and knowledge of critical social issues. Suitability for professional practice in social work will also be considered.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Applicants may be asked to complete an admissions interview in person or virtually as part of the application process.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **7.5 FCEs** as follows:
  - Year 1 courses and practicum (3.5 FCEs):
    - SWK4101H *Understanding Historical and Multigenerational Trauma*
    - SWK4106H *Social Work Ethics and Indigenous Communities*
    - SWK4108H *Sexual Abuse, Sexual Assault, and the Family*
    - SWK4109H *Trauma and Human Development*
    - SWK4110H *Trauma and Addiction*
    - SWK4510H *Research for Evidence-Based Social Work Practice*
    - SWK4902H *Indigenous Perspectives on Grief, Loss, and Unattended Sorrow*
    - Students entering the program with a degree other than a BSW must complete an additional 1.0 FCE in Year 1:
      - SWK4102H *Social Policy and Social Welfare in the Canadian Context*
      - SWK4516H *Indigenous Trauma and Resiliency Practicum*.
  - Year 2 courses and practicum (4.0 FCEs):
    - SWK4111H *Trauma-Informed Schools, Community Intervention, and the Healing Power of Ceremony*
    - SWK4517H *Indigenous and Participatory Research Methods*
    - SWK4703Y *MSW ITR Practicum III*
    - SWK4901H *Facilitating Training in Indigenous Communities*
    - SWK4903H *Trauma-Informed Care, Organizations, Supervision, and Leadership*
    - SWK4904H *Working with Couples and Families in Indigenous Context*
    - SWK4905H *Seeing the Need, Creating the Solution*.
  - Students in the **thesis option** must complete a total of **8.5 FCEs** in coursework, including 6.5 FCEs in required courses, 1.0 FCE in practica, and 1.0 FCE in the thesis.
    - Students entering the program with a degree other than a BSW must complete an additional 1.0 FCE in Year 1:
      - SWK4102H *Social Policy and Social Welfare in the Canadian Context*
      - SWK4516H *Indigenous Trauma and Resiliency Practicum*.
    - The MSW thesis option provides hands-on research experience. The thesis is an independent piece of research intended to enable students to develop and apply research skills within the context of social work practice and to write a graduate thesis of publishable quality. Note: The thesis option is available to a limited number of students — maximum three in any given year — whose proposed research must be approved by a review panel and by the Associate Dean, Research.
    - Students in the thesis option who have a minimum of two years' prior full-time social work experience are eligible to apply to take an additional 1.0 elective FCE in place of the Year 2 practicum (SWK4703Y). Workplace supervision must have occurred with an MSW supervisor; requests for substitution must be reviewed and approved by the Faculty Assessment Committee.
    - Students who choose the thesis option may require at least one additional academic session to complete the program.
- **Students are expected to submit** a Vulnerable Sector Verification, by June 1, prior to course registration. It is strongly recommended that students begin this process early.

Mode of Delivery: Hybrid
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Social Work: Social Work MSW; Field: Social Justice and Diversity

Reducing inequalities and marginalization is in line with professional social work's agenda of anti-oppression and social justice. Social work is committed to working with and on behalf of people from disenfranchised backgrounds.

MSW Program; Field: Social Justice and Diversity (Two-Year Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Social Work's additional admission requirements stated below.
- Applicants with an **appropriate bachelor's degree** with a minimum average equivalent to at least a University of Toronto mid-B in the final year of full-time study from a recognized university are admitted to a two-year MSW program.
- All applicants must have included 3.0 full-course equivalents (FCEs) in social science courses, including 0.5 FCE in research methodology. A mid-B is strongly recommended in the research methodology course.
- Experience (voluntary or paid) in the social services or related field and knowledge of critical social issues are recommended. Suitability for professional practice in social work will also be considered.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Initial admission inquiries should be made directly to the Faculty of Social Work. Please note that applicants holding the minimum admission requirements are not guaranteed admission. All admission decisions are final.

Completion Requirements

- **Students in the MSW two-year option** must declare their field by mid-February of Year 1.
- **Coursework.** Students must successfully complete a total of **8.5 FCEs** as follows:
  - Year 1 core courses and practicum (4.5 FCEs):
    - SWK1999H *Equity, Diversity, and Inclusion Workshop* to be completed in the Fall session
    - SWK4102H *Social Policy and Social Welfare in the Canadian Context*
    - SWK4103H *Elements of Social Work Practice*
    - SWK4105H *Social Work Practice Laboratory*
    - SWK4107H *Foundations of Social Work: Knowledge, Theory, and Values that Inform Practice*
    - SWK4510H *Research for Evidence-Based Social Work Practice* (SWK4510H must be completed before taking any of the research courses in the field)
    - SWK4602H *Social Work Practice with Groups*
    - SWK4605H *Social Work Practice with Individuals and Families*
    - SWK4654H *Social Work Practice in Organizations and Communities*
    - SWK4701H *Social Work Practicum I*.
  - Year 2 field-specific courses and practicum (3.0 FCEs):
    - SWK4304H *Social Work Policy Practice and Advocacy in the Context of Neoliberal Globalization*
    - SWK4306H *Theoretical Approaches to Defining Social Injustice and Engaging in Social Change*
    - SWK4512H *Research Knowledge for Social Justice*
    - SWK4606H *Diversity, Access, and Equity in Social Work Practice*
    - SWK4702Y *Social Work Practicum II* (September to April)
  - 1.0 FCE in elective courses.
  - Students in the **thesis option** must complete a total of **8.5 FCEs** in coursework, including the 4.5 FCEs in core courses and practicum, 3.0 FCEs in field-specific courses and practicum, and 1.0 FCE in the thesis (replaces 1.0 FCE in elective courses).
    - The MSW thesis option provides hands-on research experience. The thesis is an independent piece of research intended to enable students to develop and apply research skills within the context of social work practice and to write a graduate thesis of publishable quality. Note: The thesis option is available to a limited number of students — maximum three in any given year — whose proposed research must be approved by a review panel and by the Associate Dean, Research.
    - Students in the thesis option who have a minimum of two years prior full-time social work experience are eligible to apply to take an additional 1.0 elective FCE in place of the Year 2 practicum (SWK4702Y). Workplace supervision must have occurred with an MSW supervisor; requests for substitution must be reviewed and approved by the Faculty Assessment Committee.
    - Students who choose the thesis option may require at least one additional academic session to complete the program.
- **All MSW students**: Agencies that offer practica will likely require a Vulnerable Sector Verification prior to commencing the practicum. Failure to pass this check will jeopardize a student's entry to practicum. Cost and time factors are associated with the Vulnerable Sector Verification. A delay in obtaining the results can impact the start time of a student's practicum. In anticipation of this requirement for the practicum, it is strongly recommended that students begin this process early.
- In the event that a student does not complete two or more required courses, or receives an FZ (inadequate) after repeating any course, normally steps will be taken by the Faculty to recommend the termination of the student's registration.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

MSW Program; Field: Social Justice and Diversity (Advanced-Standing Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Faculty of Social Work's additional admission requirements stated below.
- Applicants who hold a **BSW degree** with mid-B average in the final year of full-time study, or its equivalent from a recognized university, may be eligible for the MSW advanced-standing option.
- All applicants must have included 3.0 full-course equivalents (FCEs) in social science courses, including 0.5 FCE in research methodology. A mid-B is strongly recommended in the research methodology course.
- Experience (voluntary or paid) in the social services or related field and knowledge of critical social issues are recommended. Suitability for professional practice in social work will also be considered.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Advanced-standing applicants must declare their field and a preference for full-time or part-time studies at the time of application.
- Initial admission inquiries should be made directly to the Faculty of Social Work. Please note that applicants holding the minimum admission requirements are not guaranteed admission. All admission decisions are final.

Completion Requirements

- **Coursework.** Students must complete a total of **4.5 full-course equivalents (FCEs)** in coursework, as follows:
  - Field-specific courses and practicum (3.5 FCEs):
    - SWK1999H *Equity, Diversity, and Inclusion Workshop* to be completed in the Fall session
    - SWK4304H *Social Work Policy Practice and Advocacy in the Context of Neoliberal Globalization*
    - SWK4306H *Theoretical Approaches to Defining Social Injustice and Engaging in Social Change*
    - SWK4510H *Research for Evidence-Based Social Work Practice*, which must be completed before taking any of the research courses in the field
    - SWK4512H *Research Knowledge for Social Justice*
    - SWK4606H *Diversity, Access, and Equity in Social Work Practice*
    - SWK4702Y *Social Work Practicum II*.
  - 1.0 FCEs in elective courses.
  - Students in the **thesis option** must complete a total of **4.5 FCEs** in coursework, including the 3.5 FCEs in field-specific courses and practicum, and 1.0 FCE in the thesis (replaces 1.0 FCE in elective courses).
    - The MSW thesis option provides hands-on research experience. The thesis is an independent piece of research intended to enable students to develop and apply research skills within the context of social work practice and to write a graduate thesis of publishable quality. Note: The thesis option is available to a limited number of students — maximum three in any given year — whose proposed research must be approved by a review panel and by the Associate Dean, Research.
    - Students in the thesis option who have a minimum of two years prior full-time social work experience are eligible to apply to take an additional 1.0 elective FCE in place of the Year 2 practicum (SWK4702Y). Workplace supervision must have occurred with an MSW supervisor; requests for substitution must be reviewed and approved by the Faculty Assessment Committee.
    - Students who choose the thesis option may require at least one additional academic session to complete the program.
- **All MSW students**: Agencies that offer practica will likely require a Vulnerable Sector Verification prior to commencing the practicum. Failure to pass this check will jeopardize a student's entry to practicum. Cost and time factors are associated with the Vulnerable Sector Verification. A delay in obtaining the results can impact the start time of a student's practicum. In anticipation of this requirement for the practicum, it is strongly recommended that students begin this process early.
- In the event that a student does not complete two or more required courses, or receives an FZ (inadequate) after repeating any course, normally steps will be taken by the Faculty to recommend the termination of the student's registration.
- Note: advanced-standing students normally complete the program in one year of full-time study (three sessions) or two years of part-time study.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Social Work: Social Work PhD

The **Doctor of Philosophy (PhD) program** has a tradition of scholarly excellence based on the quality of the research knowledge, competence, and output of its faculty. Doctoral graduates are practice leaders and faculty members throughout the world. Enrolment in the Faculty of Social Work entails adherence to the standards of professional behaviour for the social work profession set forth in the Social Work Code of Ethics of the Canadian Association of Social Workers.

Although the program has been designed for completion in four years, students typically require a longer period to complete all of the requirements.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the graduate unit's additional admission requirements stated below.
- Master of Social Work degree or an equivalent master's degree with at least a B+ standing from an accredited program in a recognized university.
- Competency in basic statistical methods at an introductory level.
- Educational and professional experience that indicates a capacity to undertake research-oriented post-graduate work.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.
- Initial admission inquiries should be made directly to the Faculty of Social Work. Selected applicants will be asked to complete an admissions interview in person or virtually as part of the application process.
- The application deadline for the PhD program is in early January. The Faculty of Social Work does not guarantee admission to all applicants who meet its minimum requirements.

Completion Requirements

Students must successfully complete a total of **5.5 full-course equivalents (FCEs)**, generally within two years of registration, as follows:

- **Coursework.**
  - 2.0 FCEs in core research courses:
    - SWK6301H *Intermediate Statistics and Data Analysis*
    - SWK6302H *Epistemology and Social Work Research*
    - SWK6307H *Designing and Implementing Qualitative Social Work Research*
    - SWK6308H *Designing and Implementing Quantitative Social Work Research*
  - Students may be exempt from these research courses but will substitute alternate elective courses for each exempted course. Note: SWK4506H is a prerequisite for SWK6301H, or an equivalent competency exam must be passed by all incoming students with a grade of A. SWK4506H does not count towards one of the required PhD courses; however, the grade is included in the student's total grade point average calculation.
  - 2.5 FCEs in graduate-level electives, including at least 0.5 FCE from Social Work and at least 0.5 FCE from another graduate unit (with the approval of the PhD Director).
- **Seminar.**
  - SWK7000H *Doctoral Thesis Seminar* is required during the Fall session of Year 2.
  - Year 1 PhD students will attend a mandatory Year 1 colloquium during the Winter session (two full days or four half days), no credit.
- **Comprehensive exam.**
  - Following completion of **at least nine of the above required courses** (excluding SWK4506H), students must satisfactorily complete SWK8000H *Comprehensive Exam* during the Winter or Summer session of Year 2.
- Following completion of the coursework, seminar, and comprehensive exam, students must satisfactorily complete:
  - a **thesis proposal** and **oral thesis proposal defence**,
  - a **thesis,**
    - which can be in the traditional thesis format, which constitutes a distinct contribution to knowledge in the field of social work, or
    - a three-paper option based on the same fundamental principles of independent student work and scholarly rigour. The three-paper dissertation option allows students to write three related papers in a given topic or area of interest in which they have conducted research as required for the PhD program.
  - and finally, an **oral thesis defence**.
- Students are expected to achieve candidacy by completing all coursework, the comprehensive exam, and have their thesis proposal approved before the end of Year 3 of their program of study (typically by the end of August in Year 3).
- Students must have an adequate knowledge of a language other than English if an additional language is deemed essential for satisfactory completion of research for the thesis. The Faculty is responsible for ensuring that an acceptable certificate of language competence is deposited with the School of Graduate Studies.
- In the event that a student does not complete two or more required courses (excluding SWK8000H *Comprehensive Exam*), or receives an FZ (inadequate) after repeating any course, the Faculty will take steps to recommend the termination of the student's registration.
- In the event that a student receives an NCR (No Credit) for SWK8000H *Comprehensive Exam*, the Faculty will take steps to recommend the termination of the student's registration.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

Social Work: Social Work MSW Courses

Elective Courses

Courses are offered in various areas of social work practice. The choice of electives in any given year is contingent on available faculty resources. Not every course is given in any one year. Please consult the Faculty of Social Work website.

Course Code	Course Title
AGE1000H	Multidisciplinary Research Concepts in Palliative and Supportive Care
AGE2000H	Principles of Aging
ASI1000Y	Contemporary East and Southeast Asian Studies
EIP3000H	Coordinating Seminar: Ethnic, Immigration and Pluralism Studies
PAS3700H	Multidisciplinary Aspects of Addictions
SWK4000H	Social Work and Disability Practice: A Client and Family Centred Approach
SWK4001H	Emotion-Focused Therapy
SWK4002H	Elder Abuse
SWK4003H	Narrative Therapy
SWK4004H	Social Work and Law
SWK4005H	Critical Social Work Analysis with Indigenous People
SWK4006H	Social Policy Analysis
SWK4210H	Promoting Empowerment: Working at the Margins
SWK4417H	Adolescence: Social Work Challenges and the Role of Social Work
SWK4420H	Human Rights and Social Justice
SWK4422H	Social Housing and Homelessness
SWK4506H	Applied Quantitative Data Analysis
SWK4516H	Indigenous Trauma and Resiliency Practicum
SWK4604H	Social Work Practice in Mental Health
SWK4610H	Advanced Social Work Practice with Couples
SWK4614H	Social Work Practice in Palliative Care
SWK4615H	Cognitive Behavioural Theories and Clinical Social Work Practice
SWK4616H	Drug Dependencies: Interventive Approaches
SWK4617H	Cross-Cultural Social Work Practice
SWK4619H	Family Mediation: Theory and Practice
SWK4621H	Core Concepts of Child and Adolescent Trauma
SWK4622H	Social Work Practice in Health
SWK4623H	Violence in Families: Multilevel Intervention in Interdisciplinary Practice
SWK4624H	Feminist Social Work Practice
SWK4629H	Social Work Practice and Aboriginal Peoples
SWK4631H	Advanced Social Work Practice in Mental Health
SWK4632H	Advanced Social Work Practice in Health
SWK4634H	Family Practice Across the Life Cycle
SWK4636H	Special Topics in Mental Health Social Work
SWK4637H	Special Topics in Health Social Work
SWK4639H	Special Topics in Child and Family Social Work
SWK4640H	Special Topics in Mental Health Social Work 2
SWK4641H	Special Topics in Social Work in Gerontology
SWK4642H	Special Topics in Human Services Management and Leadership
SWK4643H	Special Topics in Social Justice and Diversity
SWK4644H	Special Topics in Social Work in Gerontology II
SWK4645H	Special Topics in Children and their Families II
SWK4646H	Special Topics in Human Services Management and Leadership II (modular course)
SWK4647H	Family-Centred Practices in Addictions and Mental Health
SWK4648H	Social Work in Pediatric Health Care
SWK4649H	Social Innovation and Social Entrepreneurship in the Human Services
SWK4657H	Special Topics in Social Justice and Diversity II
SWK4658H	Social Work with Immigrants and Refugees
SWK4667H	Information Technology in Professional Social Work Practice
SWK4668H	Welfare of Children
SWK4669H	Psychodynamic Theories and Clinical Social Work Practice
SWK4670H	Cybercounselling and Social Work Practice
SWK4671H	Neuroscience and Social Work Practice
SWK4673H	Mindfulness Therapy and Social Work Practice

Special Studies

Special Studies courses are designed to provide seminars or tutorials under the direction of a faculty member. The focus is on a topic of particular interest to the student which is not included in available courses.

Course Code	Course Title
SWK4801H	Special Studies I
SWK4802H	Special Studies II
SWK4803H	Special Studies III
SWK4804H	Special Studies IV

Course Code	Course Title
SWK6501H	Special Studies 1
SWK6502H	Special Studies 2
SWK6503H	Special Studies 3
SWK6504H	Special Studies 4

Social Work: Social Work PhD Courses

Compulsory Courses

Course Code	Course Title
SWK6301H	Intermediate Statistics and Data Analysis
SWK6302H	Epistemology and Social Work Research
SWK6307H	Designing and Implementing Qualitative Social Work Research
SWK6308H	Designing and Implementing Quantitative Social Work Research
SWK7000H	Doctoral Thesis Seminar
SWK8000H	Comprehensive Exam

Recommended Course

Course Code	Course Title
SWK4506H	Applied Quantitative Data Analysis

Elective Courses

The choice of electives in any given year is contingent on available faculty resources. Not every course is available in any one year. Please consult the Faculty of Social Work website.

Course Code	Course Title
SWK6004H	Conducting and Publishing Scoping Reviews in Social Work
SWK6006H	Theory and Practice of Teaching Social Work
SWK6007H	Advanced Qualitative Research Methods in Social Work
SWK6101H	Critical Evaluation of Social Work Practice Theory

These courses are designed to provide seminars or tutorials according to the particular interests of students enrolled:

Sociology

Sociology: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Sociology

MA and PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Addiction Studies**
  - Sociology, MA, PhD
- **Aging, Palliative and Supportive Care Across the Life Course**
  - Sociology, MA, PhD
- **Contemporary East and Southeast Asian Studies**
  - Sociology, MA
- **Development Policy and Power**
  - Sociology, MA
- **Diaspora and Transnational Studies**
  - Sociology, MA, PhD
- **Environmental Studies**
  - Sociology, MA, PhD
- **Ethnic, Immigration and Pluralism Studies**
  - Sociology, MA, PhD
- **Food Studies**
  - Sociology, MA, PhD
- **Jewish Studies**
  - Sociology, MA, PhD
- **Sexual Diversity Studies**
  - Sociology, MA, PhD
- **Women and Gender Studies**
  - Sociology, MA, PhD

Overview

The Department of Sociology is consistently the top-ranked sociology department in Canada, with internationally renowned scholars who have an excellent track record for securing research funding, producing outstanding sociological research, and mentoring graduate students extensively. A collegial atmosphere encourages innovation and rigour in research and teaching. The community of scholars includes faculty members, outstanding postdoctoral scholars, and creative and engaged graduate students.

The department's graduate programs provide exceptional training to students in advanced social research. The focus is on transforming graduate students from consumers of academic research into producers of new sociological knowledge. To that end, there is a strong focus on methodological training; graduate students are integrated thoroughly into the faculty research programs in the department.

Contact and Address

Web: www.sociology.utoronto.ca
Email: sociology.graduate@utoronto.ca or socgrad.assist@utoronto.ca
Telephone: (416) 978-3414
Fax: (416) 978-3963

Department of Sociology
University of Toronto, 725 Spadina Avenue
Toronto, Ontario M5S 2J4 Canada

Sociology: Graduate Faculty

Full Members

Adese, Jennifer - BA, BA, MA, PhD
Baber, Zaheer - PhD
Baumann, Shyon - BA, MA, PhD ***(Chair)***
Berrey, Ellen - AB, PhD
Berry, Brent - BS, PhD
Boase, Jeffrey - BA, MA, PhD
Bryant, Joseph - BA, MA, PhD
Brym, Robert - BA, MA, PhD
Childress, Clayton - BA, MA, PhD
Choo, Hae Yeon - BA, MA, PhD
Cranford, Cynthia - MA, PhD
Dinovitzer, Ronit - BA, MA, PhD
Doering, Laura - BA, MA, MA, PhD
Erickson, Bonnie - BA, MA, PhD
Erickson, Patricia - BA, MA, PhD
Farah Schwartzman, Luisa - PhD
Fields, Jessica - BA, MA, MA, PhD
Flores, Jerry - BA, MA, MA, PhD
Goodman, Philip - BA, MA, PhD
Green, Adam - BA, MA, MSS, PhD
Hannah-Moffat, Kelly - BA, MA, PhD
Hannigan, John - BA, MA, PhD
Hermer, Joseph - PhD ***(Chair)***
Hoffman, Steve - BA, PhD
Hsiung, Ping-Chun - PhD
Johnston, Josée - AB, MA, PhD
Kervin, John - BA, PhD
Korteweg, Anna - BA, MA, PhD
Landolt, Patricia - BA, MA, PhD
Lee, Jooyoung - BA, MA, PhD
Lee, Yoonkyung - BPhil, MA, PhD
Leschziner, Vanina - BA, AM, DPhil
Levi, Ron - BCL, LLB, LLM, SJD
Liu, Sida - LLB, PhD
Magee, William - PhD
Maghbouleh, Neda - BA, MA, PhD
Maurutto, Paula - DPhil
McEwan, Bree - BA, MA, PhD
Miles, Andrew - BA, MA, PhD

Milkie, Melissa - BA, MA, PhD ***(Graduate Chair)***
Mullen, Ann Louise - BA, MA, PhD
Owusu-Bempah, Akwasi - BA, MA, PhD
Peng, Ito - BSc, BSW, MA, PhD
Pettinicchio, David - BA, MA, PhD
Salem, Rania Hatem - BSc, MSS, PhD
Sarkar, Mahua - BA, MA, PhD
Schieman, Scott - BA, MA, PhD
Schneiderhan, Erik - PhD
Siddiqi, Arjumand - ScD
Silver, Daniel - BA, MA, PhD
Silver, Michelle - BA, BS, MA, PhD
Taylor, Judith - BA, PhD
Tepperman, Lorne - BA, MA, PhD
Veugelers, John - PhD
Welsh, Sandy - BA, MA, PhD
Wheaton, Blair - PhD
Zhang, Weiguo - PhD

Members Emeriti

Boyd, Monica - BA, MA, PhD
Brownfield, David - PhD
Campbell, Douglas - BA, MA, PhD
Fox, Bonnie - AB, PhD
Friedmann, Harriet - AB, MA, PhD
Gartner, Rosemary - AA, BA, MS, PhD
Hagan, John - BA, MA, PhD
Harvey, Edward - BA, MA, PhD
Howell, Nancy - BA, PhD
Jones, Charles - BA, MA, PhD
Kruttschnitt, Candace - BA, MA, MPH, PhD
Michelson, William - AB, AM, PhD
Reitz, Jeffrey G. - PhD
Simpson, John - BA, BD, MTh, PhD
Spencer, Metta - AB, MA, PhD
Zeitlin, Irving - BA, MA, PhD

Associate Members

Alexander, Monica - MA, PhD
Baker, Jayne - MA, PhD
Bryan, Timothy - BA, MA, PhD
Caron, Christian - BA, MA, PhD
Chmielewski, Anna Katyn - BA, MA, PhD
Doering, Jan - BA, MA, PhD
Fosse, Ethan - BA, AM, PhD
Gray, Robin - BA, MA, PhD
Grigoryeva, Angelina - BA, PhD
Innocente, Nathan - BA, MA, MA
Liddle, Kathy - BA, AM, PhD
Locklear, Sofia - BA, MA, PhD
McIvor, Mitchell - BA, MA, PhD
Nicholson Jr., Harvey - BA, MA, PhD
Pepin, Joanna - BS, MA, MSc, PhD
Richter, Lauren - BA, MA, PhD
Smith, Chris - BA, PhD
Wodtke, Geoffrey - BA, MA, PhD
Ye, Leafia - MSc, PhD

Sociology: Sociology MA

The **Master of Arts (MA) program** trains students in the theoretical approaches, research designs, and analytical skills central to the field of Sociology. It provides extensive background and knowledge valuable for a number of rewarding careers in the public and private sectors. The program also builds a strong foundation in sociological training for those who plan to pursue a doctoral degree in Sociology.

Students have the option of completing the master's degree in one of two ways:

- Coursework (the preferred option for those proceeding to the PhD).
- Coursework plus research paper.

Students can take the program on a part-time or full-time basis.

MA Program (Coursework Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Sociology's additional admission requirements stated below.
- An appropriate bachelor's degree with 5.0 full-course equivalents (FCEs) in sociology, with an overall B+ average in each of the last two years of post-secondary education. Those with excellent grades but whose preparation is insufficient will be required to take additional courses.
- Applicants are also expected to have acquired basic research and statistical skills.
- Admission decisions are based on grades and indications of superior qualifications such as letters of recommendation and a sample of the applicant's work.
- In addition to the School of Graduate Studies' online application form, applicants must submit:
  - Two letters of reference from instructors or research supervisors.
  - A paper, including summary, which the student feels represents his or her best work.
  - A one-page, single-spaced typed statement of interest indicating research interests, research experience, and reasons for applying to study sociology at the University of Toronto.
- Proficiency in the English language, demonstrated by all applicants educated outside Canada whose primary language is not English. See General Regulations section 4.3 English-Language Proficiency for minimum TOEFL (Test of English as a Foreign Language and TWE (Test of Written English) scores required.

Completion Requirements

- **Coursework:** this is the preferred option for those proceeding to the PhD. Students must successfully complete a total of **4.0 full-course equivalents (FCEs)** or eight half courses including:
  - SOC6001H *Classical Sociological Theory I*
  - SOC6302H *Statistics for Sociologists*
  - SOC6712H *Qualitative Methods I.*
- Regardless of option, the MA program is completed in 12 months.

- The choice of courses in all programs must be approved by the department.
- A maximum of 0.5 FCE in reading courses may be counted towards the degree requirements.
- A maximum of 0.5 FCE in elective courses taken outside the department may be counted towards the degree requirements unless approval of the Graduate Coordinator is obtained.
- Students must maintain a **B average** to be recommended for the MA degree.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 15 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

MA Program (Coursework Plus Research Paper Option)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Sociology's additional admission requirements stated below.
- An appropriate bachelor's degree with 5.0 full-course equivalents (FCEs) in sociology, with an overall B+ average in each of the last two years of post-secondary education. Those with excellent grades but whose preparation is insufficient will be required to take additional courses.
- Applicants are also expected to have acquired basic research and statistical skills.
- Admission decisions are based on grades and indications of superior qualifications such as letters of recommendation and a sample of the applicant's work.
- In addition to the School of Graduate Studies' online application form, applicants must submit:
  - Two letters of reference from instructors or research supervisors.
  - A paper, including summary, which the student feels represents his or her best work.
  - A one-page, single-spaced typed statement of interest indicating research interests, research experience, and reasons for applying to study sociology at the University of Toronto.
- Proficiency in the English language, demonstrated by all applicants educated outside Canada whose primary language is not English. See General Regulations section 4.3 English-Language Proficiency for minimum TOEFL (Test of English as a Foreign Language and TWE (Test of Written English) scores required.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **3.0 full-course equivalents (FCEs)** or six half courses including:
  - SOC6001H *Classical Sociological Theory I*
  - SOC6302H *Statistics for Sociologists*
  - SOC6712H *Qualitative Methods I.*
- **A research paper.**
- Regardless of option, the MA program is completed in 12 months.
- The choice of courses in all programs must be approved by the department.
- A maximum of 0.5 FCE in reading courses may be counted towards the degree requirements.
- A maximum of 0.5 FCE in elective courses taken outside the department may be counted towards the degree requirements unless approval of the Graduate Coordinator is obtained.
- Students must maintain a **B average** to be recommended for the MA degree.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 15 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Sociology: Sociology PhD

The **Doctor of Philosophy (PhD) program** provides training in conducting theoretically rich and methodologically sophisticated sociological research. Through the program, students design and carry out research projects, present their work at professional conferences, and author scholarly publications. The program is designed to provide both a broad knowledge of the discipline and specialized methodological and subject matter expertise.

Applicants may enter the PhD program via one of two routes: 1) following completion of an appropriate MA or 2) direct entry after completing a bachelor's degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Sociology's additional admission requirements stated below.
- The normal requirement is completion of the University of Toronto MA, with at least an A– standing. All students must demonstrate that their master's degree program included coursework equivalent to Classical Social Theory, Social Statistics, and Qualitative Methods I. Some students may be required to take prescribed additional courses.
- Admission decisions are based on grades and indications of superior qualifications such as letters of recommendation and a sample of the applicant's work.
- In addition to the School of Graduate Studies' online application form, applicants must submit:
  - Two letters of reference from instructors or research supervisors.
  - A paper, including summary, which the student feels represents his or her best work.

- A one-page, single-spaced typed statement of interest indicating research interests, research experience, and reasons for applying to study sociology at the University of Toronto.
- Proficiency in the English language, demonstrated by all applicants educated outside Canada whose primary language is not English. See General Regulations section 4.3 English-Language Proficiency for minimum TOEFL (Test of English as a Foreign Language and TWE (Test of Written English) scores required.

Completion Requirements

- **Coursework.** Students must complete **4.5 full-course equivalents (FCEs)** including:
  - SOC6101H *Contemporary Sociological Theory*
  - SOC6707H *Intermediate Data Analysis*
  - SOC6511H *Professional Development Seminar I*
  - SOC6711Y *Research Practicum*
  - If a student has already taken these courses at the graduate level, other courses will be substituted to obtain the 4.5 FCEs total.
  - A maximum of 0.5 FCE in reading courses may be counted towards the degree requirements.
  - A maximum of 0.5 FCE in elective courses taken outside the department may be counted towards the degree requirements unless approval of the Graduate Coordinator is obtained.
- An average of **at least B+** is required in order to be eligible to continue in the following year of any program. Failure in any course (that is, less than a B–) will require a review of the student's total program by the department.
- Doctoral students must complete SOC6511H **Professional Development Seminar I**. This seminar consists of a series of workshops designed to guide students in their graduate school career and beyond. SOC6511H must be completed in the Fall session of Year 1.
- Two **comprehensive examinations**, which must be completed by the end of Year 2.
  - Comprehensive exams are offered in each of the 12 areas of study: Computational and Quantitative Methods; Gender; Global Migration; Health and Mental Health; Political Sociology; Qualitative Methods; Race, Ethnicity, Indigeneity; Social Networks; Sociology of Crime and Law; Sociology of Culture; Theory; and Work, Stratification, and Markets.
  - If a student fails a comprehensive exam, the student has one attempt to rewrite the exam. The rewrite must occur in the next available exam session.
- Submission of a written **thesis proposal** and its successful oral defence before a supervisory committee consisting of three faculty members. If a student should fail, the student is permitted one additional opportunity to defend a revised thesis proposal.
- University policy requires that students complete all their non-thesis requirements (coursework, comprehensive examinations, thesis proposal, and language requirement if applicable) by the end of Year 3.
- Preparation of an original **PhD thesis**, which must be defended at a **Doctoral Final Oral Examination**.
- Candidates must have an adequate knowledge of **a language other than English** if an additional language is deemed essential for satisfactory completion of research for the thesis.
- Two years of **residence**, whereby students must be on campus and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Sociology's additional admission requirements stated below.
- The department may recommend admission directly after completion of an appropriate bachelor's degree. Direct entry of this kind will only be recommended for outstanding students who have provided a clear and detailed plan for thesis research.
- Admission decisions are based on grades and indications of superior qualifications such as letters of recommendation and a sample of the applicant's work.
- In addition to the School of Graduate Studies' online application form, applicants must submit:
  - Two letters of reference from instructors or research supervisors.
  - A paper, including summary, which the student feels represents his or her best work.
  - A one-page, single-spaced typed statement of interest indicating research interests, research experience, and reasons for applying to study sociology at the University of Toronto.
  - Proficiency in the English language, demonstrated by all applicants educated outside Canada whose primary language is not English. See General Regulations section 4.3 English-Language Proficiency for minimum TOEFL (Test of English as a Foreign Language and TWE (Test of Written English) scores required.

Completion Requirements

- **Coursework.** Students must complete **6.0 full-course equivalents (FCEs)** including:
  - SOC6001H *Classical Sociological Theory I*
  - SOC6101H *Contemporary Sociological Theory*
  - SOC6302H *Statistics for Sociologists*
  - SOC6511H *Professional Development Seminar I*
  - SOC6707H *Intermediate Data Analysis*
  - SOC6711Y *Research Practicum*
  - SOC6712H *Qualitative Methods I.*
  - A maximum of 0.5 FCE in reading courses and 0.5 FCE in elective courses taken outside the department may be counted towards the degree requirements.
- An average of **at least B+** is required in order to be eligible to continue in the following year of any program. Failure in any course (that is, less than a B–) will require a review of the student's total program by the department.

- Doctoral students must complete SOC6511H **Professional Development Seminar I**. This seminar consists of a series of workshops designed to guide students in their graduate school career and beyond. SOC6511H must be completed in the Fall session of Year 1.
- Two **comprehensive examinations**, which must be completed by the end of Year 2.
  - Comprehensive exams are offered in each of the 12 areas of study: Computational and Quantitative Methods; Gender; Global Migration; Health and Mental Health; Political Sociology; Qualitative Methods; Race, Ethnicity, Indigeneity; Social Networks; Sociology of Crime and Law; Sociology of Culture; Theory; and Work, Stratification, and Markets.
  - If a student fails a comprehensive exam, the student has one attempt to rewrite the exam. The rewrite must occur in the next available exam session.
- Submission of a written **thesis proposal** and its successful oral defence before a supervisory committee consisting of three faculty members. If a student should fail, the student is permitted one additional opportunity to defend a revised thesis proposal.
- University policy requires that students complete all their non-thesis requirements (coursework, comprehensive examinations, thesis proposal, and language requirement if applicable) by the end of Year 3.
- Preparation of an original **PhD thesis**, which must be defended at a **Doctoral Final Oral Examination**.
- Candidates must have an adequate knowledge of **a language other than English** if an additional language is deemed essential for satisfactory completion of research for the thesis.
- Two years of **residence**, whereby students must be on campus and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Sociology: Sociology MA, PhD Courses

For details on course offerings, check with the departmental graduate office.

Theory and Methods of Sociology — Core Courses

Course Code	Course Title
SOC6001H	Sociological Theory I
SOC6101H	Sociological Theory II
SOC6201H	Sociological Theory III
SOC6301H	Sociological Theory IV
SOC6302H	Statistics for Sociologists
SOC6303H	Ethnography
SOC6309H	Indigeneity I
SOC6401H	Special Topics in Sociological Theory
SOC6502H	The Sociology Curriculum
SOC6707H	Intermediate Data Analysis
SOC6708H	Advanced Data Analysis
SOC6710H	The Logic of Social Inquiry
SOC6711Y	Research Practicum
SOC6712H	Qualitative Methods I
SOC6713H	Qualitative Methods II
SOC6715H	Historical Sociology

Areas of Specialization

Colonialism, Racialization, Indigeneity

Course Code	Course Title
SOC6009H	Ethnicity I
SOC6109H	Ethnicity II
SOC6209H	Ethnicity III

Gender and Family

Course Code	Course Title
SOC6017H	Sociology of Families I
SOC6018H	Sociology of Religion
SOC6019H	Gender Relations I
SOC6119H	Gender Relations II
SOC6219H	Gender Relations III

Global Migration

Course Code	Course Title
SOC6002H	Topics in Global Migration I
SOC6003H	Topics in Global Migration II
SOC6004H	Topics in Global Migration III

Health and Mental Health

Course Code	Course Title
SOC6022H	Sociology of Health
SOC6023H	Sociology of Mental Health
SOC6024H	Special Topics in Health
SOC6122H	Sociology of Mental Health II
SOC6126H	The Social Ecology of Health

Networks and Community

Course Code	Course Title
SOC6008H	Network Analysis I
SOC6108H	Network Analysis II
SOC6214H	Sociology of Urbanization
SOC6314H	Community

Political Sociology

Course Code	Course Title
SOC6010H	Political Sociology I
SOC6110H	Political Sociology II
SOC6210H	Political Sociology III
SOC6014H	Environmental Sociology I
SOC6125H	Theories of Social Change

Sociology of Crime and Law

Course Code	Course Title
CRI3140H	Special Topics in Criminology and Sociolegal Studies
SOC6006H	Sociology of Crime and Law I: Criminology
SOC6106H	Sociology of Crime and Law II: Sociology of Law
SOC6206H	Sociology of Crime and Law III: Punishment
SOC6306H	Advanced Topics in Sociology of Crime and Law I
SOC6406H	Advanced Topics in Sociology of Crime and Law II
SOC6506H	Advanced Topics in Sociology of Crime and Law III

Sociology of Culture

Course Code	Course Title
SOC6516H	Sociology of Culture
SOC6517H	Culture and Cognition
SOC6520H	Special Topics in Sociology of Culture

Work, Stratification, and Markets

Course Code	Course Title
SOC6012H	Work, Stratification, and Markets I
SOC6013H	Social Inequality I
SOC6112H	Work, Stratification, and Markets II
SOC6212H	Work, Stratification, and Markets III
SOC6312H	Work, Stratification, and Markets IV

Other Courses

Course Code	Course Title
SOC6021Y	Sociology and the Policy Process in Canada
SOC6511H	Professional Development Seminar I
SOC6811H	Seminar in Teaching

Special Reading Courses

Course Code	Course Title
SOC6015H	A reading course or individual research in an approved field I
SOC6115H	A reading course or individual research in an approved field II

MA Research Paper

Course Code	Course Title
SOC6215Y	MA Research Paper

Spanish

Spanish: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Spanish

MA and PhD

- Fields:
  - Hispanic Linguistics;
  - Hispanic Literatures and Cultures

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Book History and Print Culture**
  - Spanish, MA, PhD
- **Diaspora and Transnational Studies**
  - Spanish, MA, PhD
- **Food Studies**
  - Spanish, PhD
- **Women and Gender Studies**
  - Spanish, MA, PhD

Overview

The Department of Spanish offers graduate programs leading to two degrees: Master of Arts and Doctor of Philosophy. MA and PhD students specialize in one of two fields:

- Hispanic Linguistics
- Hispanic Literatures and Cultures

Applicants are admitted under the General Regulations of the School of Graduate Studies and must also satisfy the department's requirements stated below. In all cases, programs must be approved by the department.

The application process for the **Master of Arts** program is competitive; meeting the minimum standards for admission does not guarantee acceptance.

The admissions process for the **Doctor of Philosophy** program is competitive; it is based on a number of factors in addition to grades. The principal factors include the ability of the department to offer graduate work in the applicant's preferred areas of interest, the availability of appropriate supervisory resources, and the suitability of the applicant in relation to the academic profile and programs of the department. The department does not allow direct entry to the PhD program with a BA, nor does it allow MA students to transfer to the PhD program before the coursework for the MA is completed.

Contact and Address

Web: www.spanport.utoronto.ca
Email: spanport@chass.utoronto.ca or spanish.graduate@utoronto.ca
Telephone: (416) 813-4080

Department of Spanish
University of Toronto, Victoria College
Room 208, 91 Charles Street West
Toronto, Ontario M5S 1K7 Canada

Spanish: Graduate Faculty

Full Members

Alves dos Santos Rato, Anabela - PhD
Antebi, Susan - AM, PhD ***(Graduate Coordinator)***
Colantoni, Laura - MA, PhD
Cuervo, M. Cristina - PhD
Davidson, Bob - BA, AM, PhD
Iglesias, Yolanda - BA, BA, MA, PhD
Jagoe, Eva-Lynn - BA, MA, PhD
Munjic, Sanda - BA, AM, PhD
Perez-Leroux, Ana Teresa - MA, PhD ***(Chair and Graduate Chair)***
Rivas, Victor - BA, AM, PhD
Rodriguez, Nestor E. - BA, PhD
Sá Carvalho Pereira, Carolina - BA, MA, MPH, PhD

Members Emeriti

Burke, James - BA, MA, PhD
Ellis, Keith A.A. - BA, PhD
Glickman, Robert - AB, AM, PhD
Gulsoy, Joseph - BA, BA, MA, PhD
Leon, Pedro - BA, MA, PhD
Neglia, Erminio - BA, MA, PhD
Percival, Anthony - BA, MA, PhD
Rupp, Stephen - BA, MA, MA, MPH, PhD
Sarabia, Rosa - BA, PhD
Skyrme, Raymond - BA, MA, PhD
Webster, Jill - BA, MA, PhD

Associate Members

Beck, Lauren - PhD
Durston, Alan - MA, MA, PhD
Fernandez Pelaez, Ivan - PhD
Ramirez-Salazar, Manuel - BA, MA, PhD
Sanchez-Naranjo, Jeannette - PhD
Steele, Jeffrey - BA, MA, PhD

Spanish: Spanish MA; Field: Hispanic Linguistics

The application process for the **Master of Arts (MA) program** is competitive; meeting the minimum standards for admission does not guarantee acceptance.

The MA program is also available on a part-time basis. Applicants should be aware that part-time students are not eligible for funding.

MA Program, Field: Hispanic Linguistics

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Spanish's additional admission requirements stated below.
- An appropriate bachelor's degree in Spanish or a cognate discipline from a recognized university with at least a B+ average in the final year or over senior courses.
- Fluency in spoken and written Spanish with a general background in Hispanic linguistics, normally demonstrated through undergraduate coursework.
- Applicants must have completed an introductory 1.0 full-course equivalent (FCE) in linguistics at the undergraduate level (LIN101H and LIN102H, or equivalent). Applicants who have not completed an introductory linguistics course as part of their undergraduate studies must complete LIN101H and LIN102H in the summer directly preceding their admission to the MA program.
- Applicants apply online and should arrange for electronic submission of the following materials:
  - A one-page statement of purpose, outlining the applicant's areas of interest (in English).
  - A sample of written work in Spanish (10 to 12 pages double spaced).
  - Two letters of recommendation, ideally in English (one of the letters must comment on the applicant's fluency in Spanish).
  - A curriculum vitae in English.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **4.0 full-course equivalents (FCEs)** at the graduate level as follows:
  - 1.5 FCEs in Hispanic Linguistics courses offered by the Department of Spanish.
  - 1.5 FCEs in linguistics courses offered by the Department of Linguistics. Students without a strong background in linguistics are encouraged to select from the following: LIN1028H, LIN1029H, LIN1032H.
  - 0.5 FCE in linguistics courses offered by cognate units, with departmental approval (for example, French Language and Literature; Italian Studies; Linguistics).
  - SPA1096H *From Reflective Planning to Delivery in Language Teaching*.

Mode of Delivery: In person
Program Length: 2 sessions full-time (typical registration sequence: FW); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Spanish: Spanish MA; Field: Hispanic Literatures and Cultures

The application process for the **Master of Arts (MA) program** is competitive; meeting the minimum standards for admission does not guarantee acceptance.

The MA program is also available on a part-time basis. Applicants should be aware that part-time students are not eligible for funding.

MA Program; Field: Hispanic Literatures and Cultures

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Spanish's additional admission requirements stated below.
- An appropriate bachelor's degree in Spanish or a cognate discipline from a recognized university with at least a B+ average in the final year or over senior courses.
- Fluency in spoken and written Spanish with a general background in Hispanic literature, normally demonstrated through undergraduate coursework.
- Applicants apply online and should arrange for electronic submission of the following materials:
  - A one-page statement of purpose, outlining the applicant's areas of interest (in English).
  - A sample of written work in Spanish (10 to 12 pages double spaced).
  - Two letters of recommendation, ideally in English (one of the letters must comment on the applicant's fluency in Spanish).
  - A curriculum vitae in English.

Completion Requirements

- Students must select and specialize in **one geographic area of study** in accordance with distribution requirements for the field:
  - Latin American Literature and Culture.
  - Spanish Peninsular Literature and Culture.
- **Coursework.** Students must successfully complete a total of **4.0 full-course equivalents (FCEs)** as follows:
  - 1.5 FCEs in their chosen geographic area of study.
  - 0.5 FCE in the other geographic area of study.
  - For students specializing in Latin American Literature and Culture, an additional 0.5 FCE in pre-1700 literature and culture.
  - SPA1096H *From Reflective Planning to Delivery in Language Teaching*.

- 1.0 to 1.5 elective FCEs dependant on the geographic area of study. Courses should be in the student's area of academic interest and chosen in consultation with the Associate Chair, Graduate Studies. Up to one half course (0.5 FCE) may be taken outside the department from a cognate unit (for example, Comparative Literature; French Language and Literature; History; Linguistics; Medieval Studies; Women and Gender Studies).

Mode of Delivery: In person
Program Length: 2 sessions full-time (typical registration sequence: FW); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Spanish: Spanish PhD; Field: Hispanic Linguistics

The admissions process for the **Doctor of Philosophy (PhD) program** is competitive; it is based on a number of factors in addition to grades. The principal factors include the ability of the department to offer graduate work in the applicant's preferred areas of interest, the availability of appropriate supervisory resources, and the suitability of the applicant in relation to the academic profile and programs of the department.

The department does not allow direct entry to the PhD program with a BA degree. Students in the MA program in Spanish who would like to continue to the PhD must apply through the regular application process; there is no process for direct transfer from MA to PhD.

PhD Program; Field: Hispanic Linguistics

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Spanish's additional admission requirements stated below.
- Master's degree from a recognized university in an appropriate discipline with an average of A– or higher. Applicants apply online and should arrange for electronic submission of the following material:
  - A one-page statement of purpose, outlining the applicant's areas of interest (in English).
  - A sample of written work in Spanish (10 to 12 pages double spaced).
  - Two letters of recommendation, ideally in English (one of the letters must comment on the applicant's fluency in Spanish).
  - A curriculum vitae in English.

Completion Requirements

- **Coursework.** Students must successfully complete a total of **4.0 full-course equivalents (FCEs)**.
  - Course selection is proposed to the Associate Chair, Graduate Studies, who reviews and approves the plan in consultation with the faculty supervisor to ensure they relate to the proposed research area of the dissertation. Students are expected to select from available courses in Hispanic Linguistics and appropriate courses offered by cognate units (for example, French Language and Literature; Italian Studies; Linguistics). For the purpose of general academic preparation, each student must also choose courses in three other areas of linguistics to be chosen from those offered by the Graduate Department of Spanish (phonetics/phonology; morphology/syntax; sociolinguistics; acquisition [L2 or L1]) or by cognate units (e.g., semantics; psycholinguistics, computational linguistics).
  - 0.5 FCE in Hispanic Literatures and Cultures if not previously completed at the master's level.
  - SPA1096H *From Reflective Planning to Delivery in Language Teaching*.
  - Students are expected to complete their coursework in Year 1. However, with the approval of the Associate Chair, Graduate Studies, up to 1.0 FCE may be taken in Year 2.
  - Students must maintain a minimum average of A– in order to remain in good academic standing.
- By March 25 of Year 1, each student must seek approval from the Graduate Advisory Committee for the proposed area of his/her dissertation and the membership of the Field Examination Committee (normally the proposed dissertation supervisor and two other members of the graduate faculty). The Graduate Advisory Committee will respond in writing by May 1 of the same year. The final decision in this matter rests with the Graduate Advisory Committee. In consultation with their committee, students must start their preparation for their field exams in the Summer session of Year 1.
- The **field examination** centres on two subfields: the subfield of the student's proposed dissertation research and a subfield relevant to the student's research and general preparation.
- By October 1 of Year 2, each student must submit to the Associate Chair, Graduate Studies a brief statement (three to four pages double spaced) concerning the primary and secondary subfields for their field examination and two reading lists (one for each subfield). Each reading list should consist of 25 to 30 items and should include primary and secondary sources. The student's Field Committee will review this material and meet with the student to indicate revisions or additions to the reading lists. The student must file final copies of the two reading lists and statements, as approved by the committee, with the Associate Chair, Graduate Studies by November 1.
- The field examination will take place between January 15 and February 15 of Year 2. It has two parts: a written examination of six hours and an oral examination of two hours. Each part will cover the primary and secondary subfields that the student has prepared.
  - The written examination will consist of three questions. At least one of the questions must be answered in Spanish, and at least one of the questions must be answered in English.

- The oral examination will follow two weeks after the written exam; it will normally be conducted in Spanish, although English may be used to accommodate committee members from cognate units. The Field Committee will grade the two parts of the examination together, on a credit/non-credit basis. A student who does not receive credit on the first attempt must retake both parts of the examination by May 10.

- Each student must submit a written **dissertation proposal** to the Associate Chair, Graduate Studies by April 25 of Year 2 of enrolment in the program. The written proposal articulates the topic, the research questions and methodology of the student's proposed research, and presents a sample of analysis, in approximately 25 pages double spaced. In addition, the proposal should include a bibliography, an outline of the dissertation, and a plan of action which associates the outline with activities of research and writing within a timeline for the three sessions per year. The proposal should be written in the language that the student intends to use in writing the dissertation (Spanish or English).
  - Each student must defend their dissertation proposal (including the outline and plan of action) in a two-hour, public oral examination to be held by May 15, normally conducted in the language of the student's proposal.
  - The student's Field Committee will grade the written proposal and the oral examination on a credit/non-credit basis. A student who does not receive credit on the first attempt must revise and resubmit the dissertation proposal by September 15 of Year 3 of enrolment and retake the oral examination on the proposal by October 15 of that year.
- **Language requirements** must be fulfilled before registering for Year 4. Each student must demonstrate a reading knowledge of French and of a third non-English language relevant to their area of research. These language requirements may be satisfied by passing the appropriate reading knowledge courses or examinations offered by the corresponding departments of the Faculty of Arts and Science at the University of Toronto (including the exams offered in-house by the Department of Spanish and Portuguese).
  - Significant prior training in a language (such as an undergraduate major or minor) will also be accepted as demonstration of reading knowledge.
  - Native speakers of languages other than English and Spanish, who have received their formal education in that language (minimum of a high school diploma) may request an exemption for the third-language requirement.
- Years 3 and 4 are devoted to researching and writing the **doctoral dissertation**. The Supervisory Committee must normally approve the complete draft of the dissertation before the candidate can proceed to the Doctoral Final Oral Examination.
- Students fulfil the **residence requirement** by being registered as full-time on-campus and must reside in sufficient geographical proximity to enable them to fulfil the requirements of the program in a timely fashion. They are also expected to participate fully in departmental activities. While writing the dissertation, candidates are expected to be in residence, with the exception of absences for research purposes and approved leaves.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

Spanish: Spanish PhD; Field: Hispanic Literatures and Cultures

The admissions process for the **Doctor of Philosophy (PhD) program** is competitive; it is based on a number of factors in addition to grades. The principal factors include the ability of the department to offer graduate work in the applicant's preferred areas of interest, the availability of appropriate supervisory resources, and the suitability of the applicant in relation to the academic profile and programs of the department.

The department does not allow direct entry to the PhD program with a BA degree. Students in the MA program in Spanish who would like to continue to the PhD must apply through the regular application process; there is no process for direct transfer from MA to PhD.

PhD Program; Field: Hispanic Literatures and Cultures

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Spanish's additional admission requirements stated below.
- Master's degree from a recognized university in an appropriate discipline with an average of A– or higher. Applicants apply online and should arrange for electronic submission of the following material:
  - A one-page statement of purpose, outlining the applicant's areas of interest (in English).
  - A sample of written work in Spanish (10 to 12 pages double spaced).
  - Two letters of recommendation, ideally in English (one of the letters must comment on the applicant's fluency in Spanish).
  - A curriculum vitae in English.

Completion Requirements

- Students must specialize in **one geographic area of study** in accordance with distribution requirements for the field:
  - Latin American Literature and Culture.
  - Spanish Peninsular Literature and Culture.
- **Coursework.** Students must successfully complete a total of **4.0 full-course equivalents (FCEs)**. Course selection is proposed to the Associate Chair, Graduate Studies, who reviews and approves the plan in consultation with the faculty supervisor to ensure they relate to the proposed research area of the dissertation:
  - A minimum of 1.5 FCEs in their chosen geographic area of study.

    - 0.5 FCE in the other geographic area of study.
    - For students specializing in Latin American Literature and Culture, an additional 0.5 FCE in pre-1700 literature and culture if not previously completed at the master's level.
    - 0.5 FCE in Hispanic Linguistics, if not previously completed at the master's level.
    - SPA1096H *From Reflective Planning to Delivery in Language Teaching*.
    - Of any remaining coursework, up to 1.0 FCE may be taken outside the department from a cognate unit.
    - Students are expected to complete their coursework in Year 1. However, with the approval of the Associate Chair, Graduate, up to 1.0 FCE may be taken in Year 2.
    - Students must maintain a minimum average of A– in order to remain in good academic standing.
- By March 25 of Year 1, each student must seek approval from the Graduate Advisory Committee for the proposed area of his/her dissertation and the membership of the Field Examination Committee (normally the proposed dissertation supervisor and two other members of the graduate faculty). The Graduate Advisory Committee will respond in writing by May 1 of the same year. The final decision in this matter rests with the Graduate Advisory Committee. In consultation with their committee, students must start their preparation for their field exams in the Summer session of Year 1.
- The **field examination** centres on two subfields: the subfield of the student's proposed dissertation research and a subfield relevant to the student's research and general preparation.
- By October 1 of Year 2, each student must submit to the Associate Chair, Graduate Studies a brief statement (three to four pages double spaced) concerning the primary and secondary subfields for their field examination and two reading lists (one for each subfield). Each reading list should consist of 25 to 30 items and should include primary and secondary sources. The student's Field Committee will review this material and meet with the student to indicate revisions or additions to the reading lists. The student must file final copies of the two reading lists and statements, as approved by the committee, with the Associate Chair, Graduate Studies by November 1.
- The field examination will take place between January 15 and February 15 of Year 2. It has two parts: a written examination of six hours and an oral examination of two hours. Each part will cover the primary and secondary subfields that the student has prepared.
    - The written examination will consist of three questions. At least one of the questions must be answered in Spanish, and at least one of the questions must be answered in English.
    - The oral examination will follow two weeks after the written exam; it will normally be conducted in Spanish, although English may be used to accommodate committee members from cognate units. The Field Committee will grade the two parts of the examination together, on a credit/non-credit basis. A student who does not receive credit on the first attempt must retake both parts of the examination by May 10.
- Each student must submit a written **dissertation proposal** to the Associate Chair, Graduate Studies by April 25 of Year 2 of enrolment in the program. The written proposal articulates the topic, the research questions and methodology of the student's proposed research, and presents a sample of analysis, in approximately 25 pages double spaced. In addition, the proposal should include a bibliography, an outline of the dissertation, and a plan of action which associates the outline with activities of research and writing within a timeline for the three sessions per year. The proposal should be written in the language that the student intends to use in writing the dissertation (Spanish or English).
    - Each student must defend their dissertation proposal (including the outline and plan of action) in a two-hour, public oral examination to be held by May 15, normally conducted in the language of the student's proposal.
    - The student's Field Committee will grade the written proposal and the oral examination on a credit/non-credit basis. A student who does not receive credit on the first attempt must revise and resubmit the dissertation proposal by September 15 of Year 3 of enrolment and retake the oral examination on the proposal by October 15 of that year.
- **Language requirements** must be fulfilled before registering for Year 4. Each student must demonstrate a reading knowledge of French and of a third non-English language relevant to their area of research. These language requirements may be satisfied by passing the appropriate reading knowledge courses or examinations offered by the corresponding departments of the Faculty of Arts and Science at the University of Toronto (including the exams offered in-house by the Department of Spanish and Portuguese).
    - Significant prior training in a language (such as an undergraduate major or minor) will also be accepted as demonstration of reading knowledge.
    - Native speakers of languages other than English and Spanish, who have received their formal education in that language (minimum of a high school diploma) may request an exemption for the third-language requirement.
- Years 3 and 4 are devoted to researching and writing the **doctoral dissertation**. The Supervisory Committee must normally approve the complete draft of the dissertation before the candidate can proceed to the Doctoral Final Oral Examination.
- Students fulfil the **residence requirement** by being registered as full-time on-campus and must reside in sufficient geographical proximity to enable them to fulfil the requirements of the program in a timely fashion. They are also expected to participate fully in departmental activities. While writing the dissertation, candidates are expected to be in residence, with the exception of absences for research purposes and approved leaves.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

Spanish: Spanish MA, PhD Courses

Most graduate courses are offered in a regular rotation. As a result, only a subset of the courses that appear in this calendar entry will be available in a given academic session. A list of offered courses is posted on the department's website.

Course Code	Course Title
SPA1053H	History of the Spanish Language
SPA1080H	Descriptive Grammar of Spanish
SPA1081H	Structure of Spanish
SPA1082H	Sociolinguistics of Spanish
SPA1083H	Microvariation in Spanish
SPA1084H	Experimental Approaches to Hispanic Linguistics
SPA1089H	Spanish Morphosyntax
SPA1090H	Second Language Speech Learning
SPA1091H	Second Language Acquisition of Portuguese and Spanish
SPA1092H	Portuguese and Spanish Semantics
SPA1093H	Linguistics in Spanish
SPA1096H	From Reflective Planning to Delivery in Language Teaching
SPA1101H	Topics in the Acquisition of Spanish
SPA1104H	Experimental Approaches to Sound Variation and Change
SPA1150H	Directed Research in Hispanic Linguistics
SPA2018H	Poetics of Early Drama
SPA2121H	Politics of Affect
SPA2152H	Cervantes' Don Quixote
SPA2160H	Transatlantic Hispanic Baroque
SPA2186H	House, Home, and Dwelling in Latin America
SPA2291H	The Urban Experience in Spain
SPA2292H	New Ruralism and Spain
SPA2305H	Auteurism in Spanish Cinema
SPA2352H	Modern Spanish Drama and its Traditions
SPA2400H	Topics in Latin American Cultural and Literary Studies
SPA2404H	The Latin American Novel
SPA2406H	Latin American Narratives of Resistance
SPA2411H	Latin American Icons and the Sensory Work of Objects
SPA2412H	Disease Stories: Race, and Fears of Contagion in Latin America
SPA2415H	Disability and Latin American Cultural Production
SPA2424H	Spanish American Poetry and Poetics
SPA2425H	21st Century Latin American Art and Culture
SPA2428H	Latin American Visual Culture
SPA2802H	The Politics of Errantry in the Hispanic Caribbean
SPA2805H	Representations of Women in Latin American Culture
SPA2900H	Issues in Literary Theory and Hispanic Texts
SPA2905H	Latin American Cultural Theories
SPA2940H	Pursuing the Post-Revolution: Literature and Philosophy of Mexicanidad
SPA2947H	Transparency and Politics in Contemporary Mexican Literature
SPA3000H	Directed Research in Hispanic Literatures
SPA3300H	Hispanic Literature and Linguistics Research Forum
SPA3400H	Research Development
JRL1101H	Topics in Romance Laboratory Phonetics and Phonology I: Theory

Speech-Language Pathology

Speech-Language Pathology: Introduction

Faculty Affiliation

Medicine

Degree Programs

Speech-Language Pathology

MHSc

Overview

The Department of Speech-Language Pathology was established at the University of Toronto in 1958 with the creation of a two-year postgraduate diploma program, the first English-speaking program in Canada. The **Master of Health Science (MHSc)** program was established in 1978 and is a full-time professional graduate program. Academic and clinical faculty provide innovative teaching and learning opportunities for students in a unique integrated curriculum.

Contact and Address

Web: slp.utoronto.ca
Email: slp.studentaffairs@utoronto.ca
Telephone: (416) 978-1794

Department of Speech-Language Pathology
Temerty Faculty of Medicine
University of Toronto
Rehabilitation Sciences Building
#160-500 University Avenue
Toronto, Ontario M5G 1V7 Canada

Speech-Language Pathology: Graduate Faculty

Full Members

Beal, Deryk - BA, MHSc, PhD
Bressmann, Tim - MPH, PhD
De Nil, Luc - MSc, PhD
Girolametto, Luigi - BA, MSc, PhD
Helms-Park, Rena - BA, AM, MA, DPhil
Johnson, Carla - PhD
Martino, Rosemary - BS, MA, MSc, PhD ***(Chair and Graduate Chair)***
Rochon, Elizabeth - BA, MSc, PhD
Simic, Tijana - BSc, MHSc, PhD
Square, Paula Ann - BSc, MA, PhD
Steele, Catriona - BA, MHSc, PhD
van Lieshout, Pascal - MA, MA, PhD
Washington, Karla - BA, MSc, PhD
Yunusova, Yana - MA, MS, PhD

Associate Members

Bradley, Kimberley - BA, MHSc, PhD
Ellwood, Lynn - BSc(CD), MA
Jacobson, Marlene - BA, PhD
Kagan, Aura - BA, BAA, MA, PhD
Leonard, Carol - BA, MASc, PhD
Parnes, Penny - BSc
Wagner, Susan - BSc, MSc
Weitzman, Elaine - BA, MEd

Speech-Language Pathology: Speech-Language Pathology MHSc

The **Master of Health Science (MHSc) program** educates graduate students to become highly competent entry-level clinicians in the profession of speech-language pathology. It prepares students to work in a variety of settings, such as hospitals, schools, community clinics, and private practice. Speech-language pathologists provide services across the lifespan to individuals with a wide range of speech, language, hearing, and swallowing disorders. The integrated curriculum places equal emphasis on theoretical and practical competencies regarding normal development, as well as the assessment and treatment of disorders in human communication and swallowing.

The MHSc program offers a unique and internationally acclaimed curriculum that extends over 22.5 months and comprises five academic and four clinical units. The themed academic units are directly followed by full-time clinical placements targeting the same areas of practice, enabling a strong research-to-practice focus.

Throughout the two-year program, students will develop a strong focus on evidence-based and interprofessional practice through lectures, learning activities, mentorship, and self-directed projects. As part of SLP1509Y, students will participate in the Interprofessional Education curriculum offered by the Centre for Interprofessional Education at the University of Toronto. At the conclusion of their MHSc program, students will have an opportunity to showcase their learning outcomes and entry-level competencies.

MHSc Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies.

- Applicants must also satisfy the Department of Speech-Language Pathology's additional admission requirements stated below and outlined in the Ontario Rehabilitation Sciences Application Service (ORPAS) Application Guide.
- Applicants must obtain an appropriate bachelor's degree from a recognized university, with a standing equivalent to at least a University of Toronto mid-B in the final year.
- Applicants must complete prerequisite undergraduate university-level courses with grades of at least a B+ in child development (one half course), general linguistics (one half course), phonetics (one half course), elementary statistics (one half course), research methods (one half course), and human physiology (one full course).
- Applicants must arrange to have two academic referees complete the Confidential Assessment Form and write an academic reference letter.
- Applicants must complete a minimum of 14 hours of clinical experience supervised by a registered speech-language pathologist.
- Applicants must arrange for a Clinical Reference Form and accompanying letter from the primary supervisor of the clinical experience.
- Applicants must complete a Statement of Intent that has two components: 1) their reasons for choosing speech-language pathology as a career; specific personal attributes that would be relevant to the profession; academic and non-academic accomplishments; and reasons for choosing the MHSc program in Speech-Language Pathology at the University of Toronto; and 2) a summary of volunteer experiences.
- Proficiency in oral and written English is required for both the academic and applied aspects of the program. Applicants who were educated outside Canada, whose primary language is not English and who graduated from a university where the language of instruction was not English, must demonstrate proficiency in the English language through the successful completion of one of the English proficiency tests. To satisfy the requirement, the department strongly prefers the Test of English as a Foreign Language (TOEFL) with the following minimum scores:
  - Internet-based TOEFL: 100/120 with 22/30 on the speaking section and 22/30 on the writing section.
- If an applicant finds it impossible to take the TOEFL, the department will accept the International English Language Testing System (IELTS) with a minimum score of 8.0.
- Applicants may be requested to attend a personal meeting with members of the Department of Speech-Language Pathology to provide an opportunity to clarify documentation and explore in-depth issues, such as spoken and written language ability and areas of academic performance or interpersonal communication skills.
- See the departmental website and the ORPAS Application Guide for details on application instructions.

Completion Requirements

- The professional MHSc program is divided into **five academic and four clinical units**. Successful completion of all courses and program requirements in the units is required. Each academic unit is composed of related coursework.
- Students must successfully complete a total of **17.5 full-course equivalents (FCEs)** as follows:
  - Year 1:
    - SLP1500Y *Internship*
    - SLP1502Y *Anatomy and Embryology*
    - SLP1503Y *Articulation and Related Disorders*
    - SLP1505Y *Child Language I*
    - SLP1506H *Child Language II*
    - SLP1507H *Clinical Laboratory in Speech-Language Pathology*
    - SLP1509Y *Integrating Client, Practitioner, and Research Knowledge in Practice*
    - SLP1514Y *Applied Audiology*
    - SLP1516H *Aural Rehabilitation*
    - SLP1520H *Principles of Clinical Practice*
    - SLP1521H *Augmentative Communication*
    - SLP1522Y *Speech Physiology and Acoustics*
    - SLP1529H *Fluency Disorders*
    - SLP1530H *Voice Disorders*
    - SLP1532H *Clinical Laboratory in Hearing Disorders*
  - Year 2:
    - SLP1508Y *Advanced Clinical Laboratory in Speech-Language Pathology*
    - SLP1525H *Structurally Related Disorders*
    - SLP1527H *Clinical Analysis of Communication and Swallowing Disorders*
    - SLP1533Y *Aphasia*
    - SLP1534H *Motor Speech Disorders*
    - SLP1535H *Advanced Principles of Clinical Practice*
    - SLP1536H *Swallowing Disorders*
    - SLP1538H *Neurocognitive Communication Disorders*
    - SLP2500Y *Advanced Internship*.
- Teaching within and across units emphasizes integrated learning experiences. Academic units are followed by full-time clinical placements, four overall for a total of 30 weeks of clinical experience throughout the two-year program. Students should anticipate receiving at least one placement outside the Greater Toronto Area. Students must accept placements offered to them and are responsible for all related travel and accommodation costs.
- Prior to graduation, all MHSc students are required to demonstrate their learning outcomes and entry-level competency in key areas of professional practice.
- Students will complete the program requirements within two consecutive years.

Mode of Delivery: In person
Program Length: 6 sessions full-time (typical registration sequence: FWS-FWS)
Time Limit: 3 years full-time

Speech-Language Pathology: Speech-Language Pathology MHSc Courses

Consult the departmental website for a listing of all required courses offered during each academic year.

Students must successfully complete a total of **17.5 full-course equivalents (FCEs)** as follows:

Year 1

Course Code	Course Title
SLP1500Y	Internship
SLP1502Y	Anatomy and Embryology
SLP1503Y	Articulation and Related Disorders
SLP1505Y	Child Language I
SLP1506H	Child Language II
SLP1507H	Clinical Laboratory in Speech-Language Pathology
SLP1509Y	Integrating Client, Practitioner, and Research Knowledge in Practice
SLP1514Y	Applied Audiology
SLP1516H	Aural Rehabilitation
SLP1520H	Principles of Clinical Practice
SLP1521H	Augmentative Communication
SLP1522Y	Speech Physiology and Acoustics
SLP1529H	Fluency Disorders
SLP1530H	Voice Disorders
SLP1532H	Clinical Laboratory in Hearing Disorders

Year 2

Course Code	Course Title
SLP1508Y	Advanced Clinical Laboratory in Speech-Language Pathology
SLP1525H	Structurally Related Disorders
SLP1527H	Clinical Analysis of Communication and Swallowing Disorders
SLP1533Y	Aphasia
SLP1534H	Motor Speech Disorders
SLP1535H	Advanced Principles of Clinical Practice
SLP1536H	Swallowing Disorders
SLP1538H	Neurocognitive Communication Disorders
SLP2500Y	Advanced Internship

Statistical Sciences

Statistical Sciences: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Financial Insurance

MFI

Statistics

MSc

- Fields:
  - Statistical Theory and Applications;
  - Probability

PhD

- Fields:
  - Statistical Theory and Applications;
  - Probability;
  - Actuarial Science and Mathematical Finance

Overview

Statistical Sciences involves the study of random phenomena and encompasses a broad range of scientific, industrial, and social processes. As data become ubiquitous and easier to acquire, particularly on a massive scale, and computational tools become more efficient, models for data are becoming increasingly complex. The past several decades have witnessed a vast impact of statistical methods on virtually every branch of knowledge and empirical investigation.

Please visit the departmental website for details about the fields offered, the research being conducted, and the courses. The department offers substantial computing facilities and operates a statistical consulting service for the University's research community. Programs of study may involve association with other departments such as Astronomy and Astrophysics, the Dalla Lana School of Public Health, the Faculty of Information, Mathematics, Philosophy, Psychology, Sociology, the Rotman School of Management, and the School of the Environment. The Department of Statistical Sciences maintains an active seminar series and strongly encourages graduate student participation.

Students may be interested in the Data Science concentration within the Master of Science in Applied Computing program.

Contact and Address

MFI Program

Web: www.mfi.utoronto.ca
Email: mfi.info@utoronto.ca
Telephone: (416) 978-7420

Department of Statistical Sciences
Faculty of Arts & Science, University of Toronto
Ontario Power Building, 700 University Avenue, 9th Floor
Toronto, Ontario M5G 1Z5 Canada

MSc and PhD Programs

Web: www.statistics.utoronto.ca
Email: grad.statistics@utoronto.ca

Department of Statistical Sciences
Faculty of Arts & Science, University of Toronto
Ontario Power Building, 700 University Avenue, 9th Floor
Toronto, Ontario M5G 1Z5
Canada

Statistical Sciences: Graduate Faculty

Full Members

Alexander, Monica - MA, PhD
Alexander, Rohan Peter - MEc, PhD
Badescu, Andrei - BSc, MSc, DPhil
Brenner, David - BSc, MSc, PhD
Broverman, Samuel - BSc, MSc, PhD
Brown, Patrick - BA, MSc, PhD
Brunner, Jerry - BA, MA, PhD, DPhil
Craiu, Radu - BSc, MSc, PhD
Duvenaud, David - PhD
Escobar, Michael - BS, PhD
Evans, Michael - BSc, MSc, PhD
Feuerverger, Andrey - BSc, PhD
Fortin, Marie-Josée - MSc, PhD, CRC
Franklin, Meredith - BSc, MSc, PhD
Goldenberg, Anna - PhD, PhD
Gong, Ruobin - PhD
Gronsbell, Jessica - BA, PhD
Jaimungal, Sebastian - BSc, MSc, PhD ***(Chair and Graduate Chair)***
Knight, Keith - BSc, MS, PhD
Kong, Dehan - BS, MS, PhD
Leos Barajas, Vianey - BSc, PhD
Lin, Xiaodong - BSc, MSc, MMath, PhD
Lou, Wendy - DPhil
McDunnough, Philip - BSc, MSc, PhD
Park, Jun Young - PhD
Pesenti, Silvana - BSc, MSc, PhD
Quastel, Jeremy - BSc, MS, PhD
Reid, Nancy - BM, MSc, PhD, FRSC
Rosenthal, Jeffrey - BSc, AM, PhD, FRSC
Roy, Daniel - BS, MEng, PhD
Seco, Luis - PhD
Shi, Xiaofei - MSc, PhD
Speagle, Joshua - MA, PhD

Stafford, James - BS, MS, PhD
Strug, Lisa - BS, BA, SM, PhD
Sun, Lei - BS, PhD
Sun, Qiang - BSc, PhD
Tyrrell, Pascal - BSc, MSc, PhD
Urtasun, Raquel - PhD
Virag, Balint - BA, MA, PhD
Volgushev, Stanislav - MA, PhD ***(Associate Chair, Graduate Studies)***
Zhou, Zhou - MSc, DPhil
Zwiernik, Piotr - MSc, MSc, PhD

Members Emeriti

Andrews, David - BSc, MSc, PhD
Guttman, Irwin - BSc, MA, PhD
Srivastava, Muni - MSc, PhD

Associate Members

Butler, Kenneth - BS, MS, PhD
Caetano, Samantha-Jo - BSc, MSc, PhD
Campbell, Kieran - PhD
Daignault, Katherine Suzanne - MSc, PhD
Gibbs, Alison - BSc, MSc, PhD
Maddison, Christopher - PhD
Moon, Michael jongho - MSc
Moon, Nathalie - BSc, MMath, PhD
Schwartz, Scott - BS, BA, PhD
Taback, Nathan - BSc, MSc, PhD
White, Bethany - BSc, MMath, PhD
Willmot, Gordon - BMath, MMath, PhD
Zhang, Vicki - BScEE, MSc

Statistical Sciences: Financial Insurance MFI

The **Master of Financial Insurance (MFI)** is a full-time professional program based on three pillars: data science, financial mathematics, and insurance modelling. This program is appropriate for students with backgrounds in statistics, actuarial science, economics, and mathematics. Students with a quantitative background (such as physics and engineering) and sufficient statistical training are also encouraged to apply.

Master of Financial Insurance

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Statistical Sciences' additional admission requirements stated below.
- An appropriate bachelor's degree from a recognized university in a related field such as statistics, mathematics, finance, and actuarial science, or any discipline where there is a significant quantitative component. Studies must include significant exposure to statistics, mathematics, finance, and actuarial science, including coursework in advanced calculus, computational methods, linear algebra, probability, and statistics.
- An average grade equivalent to at least a University of Toronto B+ in the final year or over senior courses; applicants who meet the SGS grade minimum of mid-B and demonstrate exceptional ability through appropriate workplace experience will be considered.
- Three letters of reference including two academic references, one of which should be in a quantitative discipline.
- A curriculum vitae detailing the student's educational background, professional experience, and skills.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English using one of the official methods outlined in the *SGS Calendar*.
- Selected applicants may be required to attend an interview.

Admission to the program is competitive, and achievement of the minimum admission standards does not guarantee admission into the program.

Completion Requirements

- Students must successfully complete **5.5 full-course equivalents (FCEs)** as follows:
  - Eight required half courses (4.0 FCEs).
  - STA2546H *Data Analytics in Practice*.
  - Any one of Statistical Sciences' 0.25 FCE 4000-level graduate course offerings with significant financial, insurance, or data science components, with approval of the MFI program director.
  - STA2560Y *Industrial Internship*, a four-month summer internship. Students must submit a project proposal to the program director and select an advisor by May 15. An interim report is required by July 7. Students must prepare a final written report and deliver an oral presentation on the internship project at the conclusion of the internship.

Required Courses

- Fall Session
  - STA2503H *Applied Probability for Mathematical Finance*
  - STA2530H *Applied Time-Series Analysis*
  - STA2535H *Life Insurance Mathematics*
  - STA2536H *Data Science for Risk Modelling*
  - STA2550H *Industrial Seminar Series*
- Winter Session
  - STA2540H *Insurance Risk Management*
  - STA2546H *Data Analytics in Practice*
  - STA2550H *Industrial Seminar Series*
  - STA2551H *Finance and Insurance Case Studies*
  - STA2570H *Numerical Methods for Finance and Insurance*
  - STA45## [To be selected by the student with approval of the Director.]
- Summer Session
  - STA2560Y *Industrial Internship*

Mode of Delivery: In person

Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

Statistical Sciences: Statistics MSc

Students in the **Master of Science (MSc) program** can conduct research in the fields of 1) Statistical Theory and Applications or 2) Probability. The program offers numerous courses in theoretical and applied aspects of Statistical Sciences, which prepare students for pursuing a PhD program or directly entering the data science workforce.

The MSc program can be taken on a full-time or part-time basis. Program requirements are the same for the full-time and part-time options.

MSc Program; Fields: 1) Statistical Theory and Applications; 2) Probability

Minimum Admission Requirements

- Admission to the MSc program is competitive, and applicants are admitted under the General Regulations of the School of Graduate Studies. Admission requirements for the Statistical Theory and Applications field and the Probability field are identical. Successful applicants have:
  - An appropriate bachelor's degree from a recognized university in a related field such as statistics, actuarial science, mathematics, economics, engineering, or any discipline where there is a significant quantitative component. Studies must include significant exposure to statistics, computer science, and mathematics, including coursework in advanced calculus, computational methods, linear algebra, probability, and statistics.
  - An average grade equivalent to at least a University of Toronto mid-B in the final year or over senior courses.
  - Three letters of reference.
  - A curriculum vitae.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

- Both the Statistical Theory and Applications field and the Probability field have the same program requirements. All programs must be approved by the Associate Chair for Graduate Studies.
- Students must complete a total of **4.0 full-course equivalents (FCEs)**, of which 2.0 must be chosen from the list below:
  - STA2101H *Methods of Applied Statistics I*
  - STA2201H *Methods of Applied Statistics II*
  - STA2111H *Probability Theory I*
  - STA2211H *Probability Theory II*
  - STA2112H *Mathematical Statistics I*
  - STA2212H *Mathematical Statistics II*
- The remaining 2.0 FCEs may be selected from:
  - Any Department of Statistical Sciences 2000-level course or higher.
  - Any 1000-level course or higher in another graduate unit at the University of Toronto with sufficient statistical, computational, probabilistic, or mathematical content.
  - One 0.5 FCE as a reading course.
  - One 0.5 FCE as a research project.
  - A maximum of 1.0 FCE from any STA 4500-level modular course (each are 0.25 FCE).
- All programs must be approved by the Associate Chair for Graduate Studies. Students must meet with the Associate Chair to ensure that their program meets the requirements and is of sufficient depth.
- **Part-time students** are limited to taking 1.0 FCE during each session. In exceptional cases, the Associate Chair for Graduate Studies may approve 1.5 FCEs in a given session.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS); 6 sessions part-time
Time Limit: 3 years full-time; 6 years part-time

Statistical Sciences: Statistics PhD

Students in the **Doctor of Philosophy (PhD) program** can conduct research in the fields of 1) Statistical Theory and Applications or 2) Probability or 3) Actuarial Science and Mathematical Finance. The research conducted in the department is vast and covers a diverse set of areas in theoretical and applied aspects of Statistical Sciences. Students have the opportunity to work in multidisciplinary areas and team up with researchers in, for example, Biostatistics, Computer Science, Economics, Engineering, and the Rotman School of Management. The main purpose of the program is to prepare students for pursuing advanced research both in academia and in research institutes.

Applicants may enter the PhD program via one of two routes: 1) following completion of an appropriate master's degree or 2) direct entry after completing an appropriate bachelor's degree (excluding Actuarial Science and Mathematical Finance).

Statistical Sciences: Statistics PhD; Field: Actuarial Science and Mathematical Finance

PhD Program

Minimum Admission Requirements

- Admission to the PhD program is competitive, and applicants are admitted under the General Regulations of the School of Graduate Studies.
- Applicants may be accepted via direct entry with a bachelor's degree in statistics from a recognized university with at least an A– average. The department also encourages applicants from biostatistics, computer science, economics, engineering, mathematics, physics, or any discipline where there is a significant quantitative component.
- Three letters of recommendation.
- A curriculum vitae.
- A letter of intent or personal statement outlining goals for graduate studies.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

Course Requirements

- During Year 1, students must complete the following **3.0 full-course equivalents (FCEs)**:
  - (1.5 FCEs) All of:
    - STA2111H *Probability Theory I*,
    - STA2211H *Probability Theory II*, **and**
    - STA2503H *Applied Probability for Mathematical Finance*.
  - (0.5 FCE) One of:
    - STA2501H *Advanced Topics in Actuarial Science* **or**
    - STA4246H *Research Topics in Mathematical Finance*.
  - (1.0 FCE) One of:
    - STA2101H *Methods of Applied Statistics I* **and** STA2201H *Methods of Applied Statistics II* **or**
    - STA2311H *Advanced Computational Methods for Statistics I* **and** STA2312H *Advanced Computational Methods for Statistics II* **or**
    - STA3000Y *Advanced Theory of Statistics*.

Comprehensive Examination Requirements

- Within Years 1 and 2, students must complete a two-part comprehensive examination: 1) an in-class written comprehensive exam and 2) a research comprehensive exam.
  - Students must attempt the in-class written comprehensive by the end of Year 1. If a student fails this portion of the comprehensive exam, one further attempt will be allowed by the end of Year 2. Students who achieve A or A+ grades in all required coursework are exempt from the in-class written exam.
  - Students must attempt the research comprehensive exam by the beginning of Year 2, which includes a technical report and an oral presentation. If a student fails this portion of the comprehensive exam, one further attempt will be allowed at the end of Year 2.
  - Students must pass both the in-class written exam and the research exam to continue in the program.

Thesis Requirements

Conducting original research is the most important part of doctoral work. The thesis document must constitute significant and original contribution to the field. Students will have yearly meetings with a committee of no less than three faculty members to assess their progress. The completed thesis must be presented and defended within the Department of Statistical Sciences in addition to being presented and defended at the School of Graduate Studies.

Residency Requirements

Students must also satisfy a three-year residency requirement, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

Statistical Sciences: Statistics PhD; Field: Probability

PhD Program

Minimum Admission Requirements

- Admission to the PhD program is competitive, and applicants are admitted under the General Regulations of the School of Graduate Studies.
- Applicants may be accepted via direct entry with a bachelor's degree in statistics from a recognized university with at least an A– average. The department also encourages applicants from biostatistics, computer science, economics, engineering, mathematics, physics, or any discipline where there is a significant quantitative component.
- Three letters of recommendation.
- A curriculum vitae.
- A letter of intent or personal statement outlining goals for graduate studies.

- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

Course Requirements

- During Year 1, students must successfully complete a total of **3.0 full-course equivalents (FCEs)** as follows:
  - STA3000Y *Advanced Theory of Statistics*

  and two of the following:
  - STA2101H *Methods of Applied Statistics I* **and** STA2201H *Methods of Applied Statistics II*
  - STA2111H *Probability Theory I* **and** STA2211H *Probability Theory II*
  - STA2311H *Advanced Computational Methods for Statistics I* **and** STA2312H *Advanced Computational Methods for Statistics II*.
- Courses must be chosen in consultation with the advisor and approved by the Associate Chair of Graduate Studies.

Comprehensive Examination Requirements

- Within Years 1 and 2, students must complete a two-part comprehensive examination: 1) an in-class written comprehensive exam and 2) a research comprehensive exam.
  - Students must attempt the in-class written comprehensive by the end of Year 1. If a student fails this portion of the comprehensive exam, one further attempt will be allowed by the end of Year 2. Students who achieve A or A+ grades in all required coursework are exempt from the in-class written exam.
  - Students must attempt the research comprehensive exam by the beginning of Year 2, which includes a technical report and an oral presentation. If a student fails this portion of the comprehensive exam, one further attempt will be allowed at the end of Year 2.
  - Students must pass both the in-class written exam and the research exam to continue in the program.

Thesis Requirements

Conducting original research is the most important part of doctoral work. The thesis document must constitute significant and original contribution to the field. Students will have yearly meetings with a committee of no less than three faculty members to assess their progress. The completed thesis must be presented and defended within the Department of Statistical Sciences in addition to being presented and defended at the School of Graduate Studies.

Residency Requirements

Students must also satisfy a two-year residency requirement, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Admission to the PhD program is competitive, and applicants are admitted under the General Regulations of the School of Graduate Studies.
- Applicants may be accepted via direct entry with a bachelor's degree in statistics from a recognized university with at least an A– average. The department also encourages applicants from biostatistics, computer science, economics, engineering, mathematics, physics, or any discipline where there is a significant quantitative component.
- Three letters of recommendation.
- A curriculum vitae.
- A letter of intent or personal statement outlining goals for graduate studies.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

Course Requirements

- Students must successfully complete a total of **5.0 full-course equivalents (FCEs)** as follows:
  - Year 1: complete 3.0 FCEs:
    - STA3000Y *Advanced Theory of Statistics*

      and two of the following:
    - STA2101H *Methods of Applied Statistics I* **and** STA2201H *Methods of Applied Statistics II*
    - STA2111H *Probability Theory I* **and** STA2211H *Probability Theory II*
    - STA2311H *Advanced Computational Methods for Statistics I* **and** STA2312H *Advanced Computational Methods for Statistics II*.
    - Courses must be chosen in consultation with the advisor and approved by the Associate Chair of Graduate Studies.
  - Complete an additional 2.0 FCEs at the graduate level. The additional courses must be approved by the Associate Chair of Graduate Studies.

Comprehensive Examination Requirements

- Within Years 1 and 2, students must complete a two-part comprehensive examination: 1) an in-class written comprehensive exam and 2) a research comprehensive exam.
  - Students must attempt the in-class written comprehensive by the end of Year 1. If a student fails this portion of the comprehensive exam, one

further attempt will be allowed by the end of Year 2. Students who achieve A or A+ grades in all required coursework are exempt from the in-class written exam.
    - Students must attempt the research comprehensive exam by the beginning of Year 2, which includes a technical report and an oral presentation. If a student fails this portion of the comprehensive exam, one further attempt will be allowed at the end of Year 2.
    - Students must pass both the in-class written exam and the research exam to continue in the program.

Thesis Requirements

Conducting original research is the most important part of doctoral work. The thesis document must constitute significant and original contribution to the field. Students will have yearly meetings with a committee of no less than three faculty members to assess their progress. The completed thesis must be presented and defended within the Department of Statistical Sciences in addition to being presented and defended at the School of Graduate Studies.

Residency Requirements

Students must also satisfy a three-year residency requirement, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Statistical Sciences: Statistics PhD; Field: Statistical Theory and Applications

PhD Program

Minimum Admission Requirements

- Admission to the PhD program is competitive, and applicants are admitted under the General Regulations of the School of Graduate Studies.
- Applicants may be accepted via direct entry with a bachelor's degree in statistics from a recognized university with at least an A– average. The department also encourages applicants from biostatistics, computer science, economics, engineering, mathematics, physics, or any discipline where there is a significant quantitative component.
- Three letters of recommendation.
- A curriculum vitae.
- A letter of intent or personal statement outlining goals for graduate studies.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

Course Requirements

- During Year 1, students must successfully complete a total of **3.0 full-course equivalents (FCEs)** as follows:
    - STA3000Y *Advanced Theory of Statistics*

  and two of the following:
    - STA2101H *Methods of Applied Statistics I* **and** STA2201H *Methods of Applied Statistics II*
    - STA2111H *Probability Theory I* **and** STA2211H *Probability Theory II*
    - STA2311H *Advanced Computational Methods for Statistics I* **and** STA2312H *Advanced Computational Methods for Statistics II*.
- Courses must be chosen in consultation with the advisor and approved by the Associate Chair of Graduate Studies.

Comprehensive Examination Requirements

- Within Years 1 and 2, students must complete a two-part comprehensive examination: 1) an in-class written comprehensive exam and 2) a research comprehensive exam.
    - Students must attempt the in-class written comprehensive by the end of Year 1. If a student fails this portion of the comprehensive exam, one further attempt will be allowed by the end of Year 2. Students who achieve A or A+ grades in all required coursework are exempt from the in-class written exam.
    - Students must attempt the research comprehensive exam by the beginning of Year 2, which includes a technical report and an oral presentation. If a student fails this portion of the comprehensive exam, one further attempt will be allowed at the end of Year 2.
    - Students must pass both the in-class written exam and the research exam to continue in the program.

Thesis Requirements

Conducting original research is the most important part of doctoral work. The thesis document must constitute significant and original contribution to the field. Students will have yearly meetings with a committee of no less than three faculty members to assess their progress. The completed thesis must be presented and defended within the Department of Statistical Sciences in addition to being presented and defended at the School of Graduate Studies.

Residency Requirements

Students must also satisfy a two-year residency requirement, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.

Mode of Delivery: In person

Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Admission to the PhD program is competitive, and applicants are admitted under the General Regulations of the School of Graduate Studies.
- Applicants may be accepted via direct entry with a bachelor's degree in statistics from a recognized university with at least an A– average. The department also encourages applicants from biostatistics, computer science, economics, engineering, mathematics, physics, or any discipline where there is a significant quantitative component.
- Three letters of recommendation.
- A curriculum vitae.
- A letter of intent or personal statement outlining goals for graduate studies.
- Applicants whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must demonstrate proficiency in English. See General Regulations section 4.3 for requirements.

Completion Requirements

Course Requirements

- Students must successfully complete a total of **5.0 full-course equivalents (FCEs)** as follows:
  - Year 1: complete 3.0 FCEs:
    - STA3000Y *Advanced Theory of Statistics* **and two** of the following:
    - STA2101H *Methods of Applied Statistics I* **and** STA2201H *Methods of Applied Statistics II*
    - STA2111H *Probability Theory I* **and** STA2211H *Probability Theory II*
    - STA2311H *Advanced Computational Methods for Statistics I* **and** STA2312H *Advanced Computational Methods for Statistics II*.
    - Courses must be chosen in consultation with the advisor and approved by the Associate Chair of Graduate Studies.
  - Complete an additional 2.0 FCEs at the graduate level. The additional courses must be approved by the Associate Chair of Graduate Studies.

Comprehensive Examination Requirements

- Within Years 1 and 2, students must complete a two-part comprehensive examination: 1) an in-class written comprehensive exam and 2) a research comprehensive exam.
  - Students must attempt the in-class written comprehensive by the end of Year 1. If a student fails this portion of the comprehensive exam, one further attempt will be allowed by the end of Year 2. Students who achieve A or A+ grades in all required coursework are exempt from the in-class written exam.
  - Students must attempt the research comprehensive exam by the beginning of Year 2, which includes a technical report and an oral presentation. If a student fails this portion of the comprehensive exam, one further attempt will be allowed at the end of Year 2.
  - Students must pass both the in-class written exam and the research exam to continue in the program.

Thesis Requirements

Conducting original research is the most important part of doctoral work. The thesis document must constitute significant and original contribution to the field. Students will have yearly meetings with a committee of no less than three faculty members to assess their progress. The completed thesis must be presented and defended within the Department of Statistical Sciences in addition to being presented and defended at the School of Graduate Studies.

Residency Requirements

Students must also satisfy a three-year residency requirement, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Statistical Sciences: Statistics MSc, PhD Courses

The department offers a selection of courses each year from the following list with the possibility of additions. The core courses will be offered each year. Consult the department for courses offered in the current academic year.

Course Code	Course Title
STA1007H	Statistics for Life and Social Scientists
STA1008H	Applications of Statistics
JAS1101H	Topics in Astrostatistics
STA2005H	Applied Multivariate Analysis
STA2006H	Applied Stochastic Processes
STA2016H	Theory and Methods for Complex Spatial Data
STA2047H	Stochastic Calculus
STA2051H	Topics in Numerical Methods in Data Science
STA2052H	Statistics, Ethics, and Law

Course Code	Course Title
STA2053H	Special Topics in Applied Statistics
STA2080H	Fundamentals of Statistical Genetics
STA2101H	Methods of Applied Statistics I
STA2102H	Computational Techniques in Statistics
STA2104H	Statistical Methods for Machine Learning and Data Mining
STA2111H	Probability Theory I
STA2112H	Mathematical Statistics I
STA2162H	Statistical Inference I
STA2163H	Online Learning and Sequential Decision Theory
STA2201H	Methods of Applied Statistics II
STA2202H	Time Series Analysis
STA2209H	Lifetime Date Modelling and Analysis
STA2211H	Probability Theory II
STA2212H	Mathematical Statistics II
STA2311H	Advanced Computational Methods for Statistics I
STA2312H	Advanced Computational Methods for Statistics II
STA2453H	Data Science Methods, Collaborations, and Communication
STA2500H	Loss Models
STA2501H	Advanced Topics in Actuarial Science
STA2502H	Stochastic Models in Investments
STA2503H	Applied Probability for Mathematical Finance
STA2505H	Credibility Theory and Simulation Methods
STA2530H	Applied Time-Series Analysis
STA2535H	Life Insurance Mathematics
STA2536H	Data Science for Risk Modelling
STA2540H	Insurance Risk Management
STA2546H	Data Analytics in Practice
STA2550H	Industrial Seminar Series
STA2551H	Finance and Insurance Case Studies
STA2555H	Information Visualization
STA2560Y	Industrial Internship
STA2570H	Numerical Methods for Finance and Insurance
STA2600H	Teaching and Learning of Statistics in Higher Education
STA2700H	Computational Inference and Graphical Models
STA3000Y	Advanced Theory of Statistics
STA3431H	Monte Carlo Methods
STA4000H	Supervised Reading Project I
STA4001H	Supervised Reading Project II
STA4002H	Supervised Reading Project for an Advanced Special Topic
STA4246H	Research Topics in Mathematical Finance
STA4273H	Research Topics in Statistical Machine Learning
STA4372H	Foundations of Statistical Inference

Note: The following **modular** courses are each worth **0.25 full-course equivalent (FCE)**.

Course Code	Course Title
STA4500H	Statistical Dependence: Copula Models and Beyond
STA4501H	Functional Data Analysis and Related Topics
STA4502H	Topics in Stochastic Processes
STA4505H	Applied Stochastic Control: High Frequency and Algorithmic Trading
STA4506H	Non-stationary Time Series Analysis
STA4507H	Extreme Value Theory and Applications
STA4508H	Topics in Likelihood Inference
STA4509H	Insurance Risk Models I
STA4510H	Topics in Insurance Risk Modelling II
STA4512H	Logical Foundations of Statistical Inference
STA4514H	Modelling and Analysis of Spatially Correlated Data
STA4515H	Multiple Hypothesis Testing and its Applications
STA4516H	Topics in Probabilistic Programming
STA4517H	Foundations and Trends in Causal Inference
STA4518H	Robust Statistical Methods
STA4519H	Optimal Transport: Theory and Algorithms
STA4522H	The Measurement of Statistical Evidence
STA4523H	Bayesian Computation with Massive Data and Intractable Likelihoods
STA4524H	Advanced Topics in Statistical Genetics
STA4525H	Demographic Methods

Course Code	Course Title
STA4526H	Stochastic Control and Applications in Finance
STA4527H	Random Matrix Theory and Its Applications
STA4528H	Dependence Modelling With Application to Risk Management
STA4529H	Applications of Nonstandard Analysis to Statistics and Probability Theory
STA4530H	Derivatives for Institutional Investing
STA4531H	Information Geometry

Theoretical Astrophysics

Theoretical Astrophysics: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

The Canadian Institute for Theoretical Astrophysics (CITA) does not offer an independent graduate degree program. Students interested in theoretical astrophysics are encouraged to enrol in the graduate programs offered by cognate departments such as Astronomy and Astrophysics, Chemistry, and Physics.

All CITA faculty hold cross-appointments in one or more of these departments; students seeking research supervision by CITA faculty are welcome to inquire. CITA research fellows and visitors are also encouraged to work with graduate students.

Overview

The Canadian Institute for Theoretical Astrophysics (CITA) is a national institute specializing in theoretical astrophysics, supported by the Natural Sciences and Engineering Research Council of Canada (NSERC) and the host University of Toronto. The CITA Inc. national network involves about 100 faculty members from about 20 Canadian universities. It maintains a complement of more than 30 postdoctoral fellows and research associates, and hosts an active program of international visitors.

Research at CITA spans most of the areas of modern theoretical astrophysics, including accretion disks, active galactic nuclei, general relativity, and gravitational waves, cosmology and cosmological aspects of particle physics, the cosmic microwave background, gravitational lenses, dark matter, galaxy formation, galaxy structure and evolution, dynamics of stellar systems, physics and chemistry of the interstellar medium, star formation, stellar evolution, novae, supernovae, compact objects, gamma-ray bursts, nucleosynthesis, solar system formation and dynamics, and comets.

CITA maintains local CPU and GPU clusters and astrophysical software for developing and testing code. Large simulations are carried out at high performance computing centres nationally and internationally. The theoretical interests of many CITA staff are complemented by observational research involving active multi-messenger programs at a wide variety of international ground-based and satellite telescopes across the electromagnetic spectrum.

Contact and Address

Web: www.cita.utoronto.ca
Email: office@cita.utoronto.ca

Telephone: (416) 978-6879
Fax: (416) 978-3921

Canadian Institute for Theoretical Astrophysics (CITA) / L'institut canadien d'astrophysique théorique (ICAT)
University of Toronto
Room 1403, McLennan Physical Laboratories
Toronto, Ontario M5S 3H8
Canada

Theoretical Astrophysics: Graduate Faculty

Full Members

Bond, J. Richard - BSc, MS, PhD, FRS, FRSC, OC
Essick, Reed - BSc, PhD
Fishbach, Maya - BSc, PhD
Kollmeier, Juna - BSc, MSc, PhD
Martin, Peter - BSc, MSc, PhD, FRSC, OC
Murray, Norman - BSc, PhD
Pen, Ue-Li - BSc, PhD
Ripperda, Bart - BSE, MSc, PhD
Thompson, Christopher - BSc, PhD
Tremaine, Scott - BSc, MA, PhD, FRS, FRSC

Women and Gender Studies

Women and Gender Studies: Introduction

Faculty Affiliation

Arts and Science

Degree Programs

Women and Gender Studies

MA and PhD

Collaborative Specializations

The following collaborative specializations are available to students in participating degree programs as listed below:

- **Aging, Palliative and Supportive Care Across the Life Course**
  - Women and Gender Studies, MA
- **Bioethics** (admissions have been administratively suspended)
  - Women and Gender Studies, MA
- **Contemporary East and Southeast Asian Studies**
  - Women and Gender Studies, MA
- **Development Policy and Power**
  - Women and Gender Studies, MA
- **Diaspora and Transnational Studies**
  - Women and Gender Studies, MA, PhD
- **Environment and Health**
  - Women and Gender Studies, MA, PhD
- **Environmental Studies**
  - Women and Gender Studies, MA, PhD
- **Ethnic, Immigration and Pluralism Studies**
  - Women and Gender Studies, MA, PhD
- **Jewish Studies**
  - Women and Gender Studies, MA
- **Sexual Diversity Studies**
  - Women and Gender Studies, MA, PhD
- **South Asian Studies**
  - Women and Gender Studies, MA, PhD
- **Women's Health**
  - Women and Gender Studies, MA, PhD
- **Workplace Learning and Social Change**
  - Women and Gender Studies, MA

Overview

The overall graduate program is cutting edge for its focus on transnational feminist studies. Graduate students and faculty investigate how gender and sexuality are informed, lived, and reinvented amidst entwined yet discrepant narratives, geographies, and histories.

Graduate work at the Women and Gender Studies Institute (WGSI) encourages an engagement with an interdisciplinary range of theories and methods that grapple with how gender and sexuality are entangled with questions of race, citizenship, embodiment, colonialism, nation, global capitalism, violence, political economy, cultural formations, aesthetics, and other pressing concerns.

The core faculty brings transnational feminist commitments to the study of diverse sites and their interconnection with particular focus on Canada, the Caribbean, Africa, the Middle East, South Asia, East Asia, and the United States. In doing so, the institute seeks to ask feminist questions as well as put feminism into question.

Areas of focus within the transnational feminist approach include:

- gender, sexuality and queer studies
- political economy and critical development studies
- feminist studies of technology, science, environment and biomedicine
- feminist cultural studies.

The MA and PhD degree programs also feature the option of a practicum that aspires to strengthen students' ability to interrogate the application of theories and methods to lived practice.

Contact and Address

Web: www.wgsi.utoronto.ca/graduate
Email: wgsi.programs@utoronto.ca
Telephone: (416) 978-3668
Fax: (416) 946-5561

Graduate Program in Women and Gender Studies
Women and Gender Studies Institute, University of Toronto
Wilson Hall, New College, 40 Willcocks Street
Toronto, Ontario M5S 1C6 Canada

Women and Gender Studies: Graduate Faculty

Full Members

Bamford, Sandra - BA, MA, MPA, PhD
Bhuyan, Rupaleem - BA, MA, PhD
Boddy, Janice - BA, MA, PhD
Boler, Megan - BA, PhD
Brown, Elspeth - MA, PhD
Charles, Nicole - BA, MA, PhD
Cobb, Michael - BA, AM, MA, PhD
Columpar, Corinn - BA, PhD
Cossman, Brenda - LLB, LLM, Goodman/Schipper Chair
Cowen, Deborah - BA, MCP, PhD
Dave, Naisargi N. - BA, MA, PhD
Diaz, Robert - PhD
Georgis, Dina - PhD ***(Graduate Coordinator)***

Keith, Alison - BA, MA, PhD, FRSC
Klassen, Pamela - BA, MA, PhD
Larson, Katie - BMus, AB, MPH, PhD
Lo, Marieme - BA, MA, MSc, PhD
Magnusson, Jamie-Lynn - BA, MA, PhD
McElhinny, Bonnie - BA, MA, MA, PhD, PhD
Mirchandani, Kiran - BA, MPH, PhD
Mojab, Shahrzad - BA, MEd, EdD
Morgenstern, Naomi - BA, MA, PhD
Murphy, M. - BA, PhD
Murray, Heather - BA, MA, PhD
Newton, Melanie - BA, PhD
Rankin, Katharine - BA, MA, PhD
Rittich, Kerry - BAMus, LLB, SJD
Salih, Sara - BA, DPhil
Silvey, Rachel - BA, MA, PhD
Song, Jesook - BA, PhD
Tahmasebi-Birgani, Victoria - MA, PhD
Taylor, Judith - BA, PhD
Titchkosky, Tanya - BA, MA, PhD
Trotz, Alissa - AB, MPH, PhD ***(Director)***
Tuck, Eve - BA, PhD
Valverde, Mariana - BA, MA, PhD, FRSC
Walcott, Rinaldo - BA, MA, PhD
Wane, Njoki - BE, MEd, MSc, PhD
Yoneyama, Lisa - BA, MA, PhD

Members Emeriti

Larkin, June - PhD
Ruddick, Susan - PhD
Sykes, Heather - BSc, PhD

Associate Members

Bos, Kristen - BA, MA, PhD
Desai, Chandni - PhD
Goldstein, Tara - BA, PhD
Kulak, Avron - PhD

Women and Gender Studies: Women and Gender Studies MA

The **Master of Arts (MA) program** in Women and Gender Studies focuses on feminist colonial, post-colonialism, diasporic, and transnational studies as rubrics for studying gender, sex, and feminism. This perspective explores the temporal and geographic processes through which women's and men's lives, sexed relations, gendered subjectivities, and sexualities are situated.

The MA program is a full-time program and cannot be taken on a part-time basis.

MA Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Women and Gender Studies Institute's additional admission requirements stated below.
- An appropriate bachelor's degree in women's studies and gender studies or a related area at an approved university. Applicants must have obtained an average equivalent to a University of Toronto B+ or better in their final year of undergraduate study.
- Letter of intent outlining the academic goals the applicant wishes to pursue in the program, two letters of recommendation, and transcripts from all post-secondary institutions.

Completion Requirements

- The student's program of study must be approved by the Women and Gender Studies Institute. Students must successfully complete a total of **3.5 full-course equivalents (FCEs)** as follows:
  - 0.5 core FCEs in women and gender studies WGS5000H *Feminist Theories, Histories, Movements I*.
  - 1.0 elective FCE in women and gender studies; either a special topics seminar or an independent research/reading course WGS1007H *Directed Research/Reading*.
  - 1.0 FCE WGS1005Y *MA Research Paper*.
  - 1.0 FCE (one year-long or two half-year courses) offered by other departments and chosen in consultation with the faculty advisor.
  - Completion of WGS2000H *WGS Research Seminar*, requiring participation in the WGS Research Seminar Series. To complete this requirement, students must attend at least 80% of the seminars during the Fall/Winter academic session.
- The MA degree program is not offered on a part-time basis.

Mode of Delivery: In person
Program Length: 3 sessions full-time (typical registration sequence: FWS)
Time Limit: 3 years full-time

Women and Gender Studies: Women and Gender Studies PhD

The **Doctor of Philosophy (PhD) program** in Women and Gender Studies has four areas of focus:

- gender, sexuality, and queer studies
- feminist cultural studies
- feminist studies of technology, science, environment, and biomedicine
- transnational political economy and development studies.

The offerings bring feminist scholarship to the tasks of challenging and investigating colonial, postcolonial, and transnational contexts. Central themes of the program include global capitalism, nation and state formation, empire, citizenship, diaspora, and cultural flows, all of which are examined through the lenses of diverse feminist scholarship. The program welcomes applications from international students.

Applicants may enter the PhD program via one of two routes:

- following completion of an appropriate MA
- direct entry after completing a bachelor's degree.

PhD Program

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Women and Gender Studies Institute's additional admission requirements stated below.
- A master's degree in women and gender studies, or a master's degree in a related discipline from a recognized university. Applicants must have obtained an average of A– or better in the master's program.
- Letter of intent outlining the academic goals the applicant wishes to pursue in the program, two letters of recommendation, a writing sample, and transcripts from all post-secondary institutions.

Completion Requirements

- The student's program of study must be approved by the Women and Gender Studies Institute.
- All **coursework** should normally be completed by the end of Year 1 of PhD study. Students must successfully complete a total of **3.0 full-course equivalents (FCEs)** as follows:
  - 1.0 FCE in Women and Gender Studies (WGS5000H *Feminist Theories, Histories, Movements I* and WGS5001H *Feminist Theories, Histories, Movements II*). Students who have already taken these courses, or their equivalent, will be required to enrol in alternate course selections, with institute approval.
  - 0.5 elective FCE in Women and Gender Studies.
  - 1.5 FCEs offered in Women and Gender Studies or by other graduate units and chosen in consultation with the student's faculty advisor.
- **WGS Research Seminar Series**. Normally, students enrol in WGS2000H *WGS Research Seminar* in Year 1 of their PhD program. Attendance at 80% of the seminars is required in Year 1. After completion of this course, students are recommended to attend this seminar regularly, as a crucial part of their graduate education. In addition, students must present their research in the seminar series once before graduation after they have achieved candidacy, a milestone captured by WGS2001H *WGS Research Seminar — Presentation*. Students will enrol in WGS2001H *WGS Research Seminar — Presentation* during the session in which they plan to present.
- **Comprehensive examinations:**
  - Completion of two comprehensive exams, one in a primary (major) and one in a secondary (minor) area of study, defined in consultation with the advisor and other committee members.
  - The thesis proposal, an integral part of the comprehensive exams, should be defended and accepted no later than August 31 of Year 2.
  - Examinations are marked on a pass/fail basis. Candidates are allowed two attempts to pass a comprehensive examination. A failure to pass on the second attempt results either in the student's voluntary withdrawal from the program, or a recommendation by the institute for termination of the student's registration in the program.
  - The major comprehensive examination should be completed by January 31 of Year 2. The minor comprehensive examination should be completed by May 31 of Year 2.
- Completion of a **doctoral thesis** based on original research conducted by the candidate on an approved topic in women and gender studies, and successful defence at the SGS Final Oral Examination.
- Each student will meet at least annually with their supervisor and other doctoral committee members to review **academic progress** and to consult about future directions.

Mode of Delivery: In person
Program Length: 4 years full-time (typical registration sequence: Continuous)
Time Limit: 6 years full-time

PhD Program (Direct-Entry)

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Women and Gender Studies Institute's additional admission requirements stated below.
- In exceptional cases, direct-entry admission is offered to outstanding students with a bachelor's degree in women and gender studies or a related area, from a recognized university. Direct-entry students must have a cumulative average of A or better. Applicants must also have obtained an average equivalent to an A– or better in their final year of undergraduate study.
- Letter of intent outlining the academic goals the applicant wishes to pursue in the program, two letters of recommendation, a writing sample, and transcripts from all post-secondary institutions.

Completion Requirements

- The student's program of study must be approved by the Women and Gender Studies Institute.
- All **coursework** should normally be completed by the end of Year 2 of PhD study. Students must successfully complete a total of **5.0 full-course equivalents (FCEs)** as follows:
  - 1.0 FCE in Women and Gender Studies (WGS5000H *Feminist Theories, Histories, Movements I* and WGS5001H *Feminist Theories, Histories, Movements II*).
  - 2.0 elective FCEs in Women and Gender Studies.
  - 2.0 FCEs offered in Women and Gender Studies or by other graduate units and chosen in consultation with the student's faculty advisor.

- **WGS Research Seminar Series**. Normally, students will enrol in WGS2000H *WGS Research Seminar* in Year 1 of their PhD program. Attendance at 80% of the seminars is required in Year 1. After completion of this course, students are recommended to attend this seminar regularly, as a crucial part of their graduate education. In addition, students must present their research in the seminar series once before graduation after they have achieved candidacy, a milestone captured by WGS2001H *WGS Research Seminar — Presentation*. Students will enrol in WGS2001H *WGS Research Seminar — Presentation* during the session in which they plan to present.
- **Comprehensive examinations**:
  - Completion of two comprehensive exams, one in a primary (major) and one in a secondary (minor) area of study, defined in consultation with the advisor and other committee members.
  - The thesis proposal, an integral part of the comprehensive exams, should be defended and accepted no later than December 31 of Year 3.
  - Examinations are marked on a pass/fail basis. Candidates are allowed two attempts to pass a comprehensive examination. A failure to pass on the second attempt results either in the student's voluntary withdrawal from the program or a recommendation by the institute for termination of the student's registration in the program.
  - The major comprehensive examination should be completed by May 31 of Year 2. The minor comprehensive examination should be completed by September 30 of Year 3.
- Completion of a **doctoral thesis** based on original research conducted by the candidate on an approved topic in women and gender studies, and successful defence at the SGS Final Oral Examination.
- Each student will meet at least annually with their supervisor and other doctoral committee members to review **academic progress** and to consult about future directions.

Mode of Delivery: In person
Program Length: 5 years full-time (typical registration sequence: Continuous)
Time Limit: 7 years full-time

Course Code	Course Title
WGS1016H	Migration, Mobility, and Displacement in Contemporary Africa
WGS1017H	Special Topics in Feminist Studies
WGS1018H	Special Topics in Feminist Studies
WGS1019H	Special Topics in Feminist Studies
WGS1020H	Gender and Globalization: Transnational Perspectives
WGS1021H	Black Diasporic Feminisms: Modernity, Freedom, Belonging
WGS1022H	Special Topics in Feminist Studies
WGS1023H	Aesthetics of Radical Hope
WGS1024H	Special Topics in Feminist Studies
WGS1025H	Futurities: World-Making within a Series of World Endings
WGS1027H	Special Topics in Queer Studies and Feminism
WGS1028H	Queer of Colour Critique
WGS1029H	Black Feminist Histories: Movements, Method, and the Archive
WGS1030H	Indigenous Feminism
WGS1031H	Gendering Racial Capitalism
WGS2000H	WGS Research Seminar (Credit/No Credit)
WGS2001H	WGS Research Seminar — Presentation (Credit/No Credit)
WGS5000H	Feminist Theories, Histories, Movements I
WGS5001H	Feminist Theories, Histories, Movements II

Women and Gender Studies: Women and Gender Studies MA, PhD Courses

Course Code	Course Title
WGS1004H	Special Topics in Feminist Theory
WGS1005Y	MA Research Paper
WGS1007H	Directed Research/Reading
WGS1009H	Special Topics in Feminist Studies 1
WGS1010H	Special Topics in Feminist Studies 2
WGS1011H	Special Topics in Feminist Studies 3
WGS1013H	Special Topics in Feminist Theory 1