University of Toronto  School of Graduate Studies  2008/2009 Calendar

Graduate Programs:
For admission and application information, contact the graduate unit directly. Contact information and Web site addresses are listed in each unit’s entry.

Web Site: www.sgs.utoronto.ca

Student Services at SGS:
Telephone: (416) 978-6614
Fax: (416) 978-4367
E-mail: graduate.information@utoronto.ca
graduate.awards@utoronto.ca

63/65 St. George Street, Toronto, Ontario, Canada, M5S 2Z9
Mission Statement

The mission of the School of Graduate Studies is to promote excellence in graduate education and research University-wide and ensure consistency and high standards across the divisions. Sharing responsibility for graduate studies with graduate units and divisions, and operating through a system of collegial governance, consultation and decanal leadership, SGS defines and administers university-wide regulations for graduate education.

SGS also provides expertise, advice and information; oversees the design and delivery of programs; organizes reviews and develops performance standards; supports diversity, equity, fairness, and ethical conduct in graduate education; organizes services and financial assistance to graduate students; encourages a close and positive relationship between research and graduate instruction; and represents the cause of graduate education at the University of Toronto in the wider academic and general community.

Officers of the School of Graduate Studies

Dean of Graduate Studies and Vice-Provost, Graduate Education
S. Pfeiffer, BA, MA, PhD

Vice-Dean, Programs
E. A. Cowper, BA, AM, PhD

Vice-Dean, Students
J. J. B. Smith, BA, MA, PhD

Dean’s Welcome

I am delighted to welcome you to the many graduate communities of the University of Toronto. We are proud of our accomplishments as a centre for graduate education that integrates advanced scholarship and research into every degree program. Please use this site to learn more about the excellent programs we offer.

Here at the largest graduate school in Canada, over 13,000 graduate students are studying in an extraordinary range of scholarly fields. The diversity of our departments, centres, and institutes means that the focus and expertise that you seek is very likely to be found within the graduate offerings at U of T. We also offer a number of interdisciplinary collaborative programs.

We welcome graduate applicants from around the world, inviting those who are successful to participate in advanced study that links research and scholarship with graduate training. We offer you a scholarly community of superb quality, one of the best academic library systems in the world, and a lively intellectual environment that sits within a remarkably cosmopolitan city.

You can investigate graduate studies at the University of Toronto more closely through the Web site: www.sgs.gradschool.utoronto.ca. That site is a gateway to the fields of study that you may choose.

Welcome to the University of Toronto’s graduate school, where your intellect and aspirations can thrive.

With my best wishes for your academic success,

Susan Pfeiffer
Dean of Graduate Studies and Vice-Provost, Graduate Education
About this Calendar

The School of Graduate Studies Calendar is published annually. It is posted on the SGS Web site at www.sgs.utoronto.ca in May. Published copies are printed by July and may be purchased using the online order form on the SGS Web site or in person from the SGS office at 63 St. George Street.

The School of Graduate Studies Calendar describes the broad range of graduate study opportunities available at the University of Toronto. It also contains policies and procedures related to graduate studies. The calendar is divided into six sections.

Section 1
General Regulations outlines admission, registration, enrolment, grading, and graduation policies and procedures. Selected policies and codes established by the University are also featured in this section with links to the full policy which is accessible online.

Section 2
Degree Regulations discusses general admission and degree requirements for programs offered by more than one graduate unit at the University. Specialized programs not mentioned in this section are described in the entry for the specific graduate unit offering the program.

Section 3
Fees and Financial Support
Fees schedules, types of fees, and fees for graduate student categories are explained.
Financial Support describes awards, assistantships, grants, and loans available to graduate students.

Section 4
Services for Students outlines University services available to enhance graduate life at U of T. Look for student housing information in this section.

Section 5
Graduate Faculty members are appointed in one of three categories: full members, members emeriti, and associate members. Faculty with appointments as full members and members emeriti are listed alphabetically, together with their home unit affiliation. Associate members are listed in the individual graduate unit entries in section 6.

Section 6
Graduate Programs. The largest component of the calendar features a comprehensive list of the graduate units that offer degree programs. The term "graduate unit" refers to a department, centre, or institute. The section is divided into three categories: degree programs, collaborative programs, and joint programs. Each graduate unit entry contains valuable information about the programs it offers together with admission and program requirements and courses of instruction. Faculty who are affiliated with the graduate unit are listed by appointment category. For additional details about a graduate program, visit the unit's Web site and/or consult the department's handbook.
Important Notices

Changes in Programs of Study and/or Courses
The programs of study that the School of Graduate Studies Calendar lists and describes are available for the academic year September 1, 2008 to August 31, 2009. They may not necessarily be available in later years. If the University or the School must change the content of programs of study or withdraw them, all reasonable possible advance notice and alternative instruction will be given. However, the University will not be liable for any loss, damages, or other expenses that such changes might cause.

For each program of study offered by the University through the School of Graduate Studies, the courses necessary to complete the minimum requirements of the program will be made available annually. However, we must reserve the right otherwise to change the content of courses, instructors and instructional assignments, enrolment limitations, prerequisites and co-requisites, grading policies, requirements for promotion, and timetables without prior notice.

Regulations and Policies
As members of the University of Toronto community, students assume certain responsibilities and are guaranteed certain rights and freedoms.

The University has several policies that are approved by the Governing Council and which apply to all students. Each student must become familiar with the policies. The University will assume that he or she has done so.

The rules and regulations of the School are listed in this calendar. In applying to the School, the student assumes certain responsibilities to the University and the School and, if admitted and registered, shall be subject to all rules, regulations and policies cited in the calendar, as amended from time to time.

All University policies can be found at www.governigcouncil.utoronto.ca/policies.htm. Those which are of particular importance to students are:

- Policy on Access to Student Academic Records
- Code of Behaviour on Academic Matters
- Code of Student Conduct
- Grading Practices Policy
- Policy on Official Correspondence with Students
- More information about students’ rights and responsibilities can be found at www.students.utoronto.ca/The_Basics/Rights_and_Rules.htm.

Enrolment Limitations
The University makes every reasonable effort to plan and control enrolment to ensure that all of our students are qualified to complete the programs to which they are admitted and to strike a practicable balance between enrolment and available instructional resources. Sometimes such a balance cannot be struck and the number of qualified students exceeds the instructional resources that we can reasonably make available while at the same time maintaining the quality of instruction. In such cases, we must reserve the right to limit enrolment in the programs, courses, or sections listed in the calendar, and to withdraw courses or sections for which enrolment or resources are insufficient. The University will not be liable for any loss, damages, or other expenses that such limitations or withdrawals might cause.

Copyright in Instructional Settings
If a student wishes to tape-record, photograph, video-record, or otherwise reproduce lecture presentations, course notes or other similar materials provided by instructors, he or she must obtain the instructor’s written consent beforehand. Otherwise, all such reproduction is an infringement of copyright and is absolutely prohibited. In the case of private use by students with disabilities, the instructor’s consent will not be unreasonably withheld.

Person ID (Student Number)
Each student at the University is assigned a unique identification number. The number is confidential. The University, through the Policy on Access to Student Academic Records, strictly controls access to Person ID numbers. The University assumes and expects that students will protect the confidentiality of their Person ID’s.

Notice of Collection of Personal Information
The University of Toronto respects your privacy. Personal information that you provide to the University is collected pursuant to section 2(14) of the University of Toronto Act, 1971. It is collected for the purpose of administering admission, registration, academic programs, university-related student activities, activities of student societies, financial assistance and awards, graduation and university advancement, and for the purpose of statistical reporting to government agencies. At all times it will be protected in accordance with the Freedom of Information and Protection of Privacy Act. If you have questions, please refer to www.utoronto.ca/privacy or contact the University Freedom of Information and Protection of Privacy Coordinator at 416 946-7303, McMurrich Building, Room 201, 12 Queen’s Park Crescent West, Toronto, ON, M5S 1A8.

An expanded version of this Notice can be found at www.fippa.utoronto.ca/policy/nocx.htm

Fees and Other Charges
The University reserves the right to alter the fees and other charges described in the calendar.
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Academic Calendar 2008/2009

2008

M August 4  Civic Holiday
M August 11  Registration for September session begins
F August 29  Last date for payment of tuition fees to meet registration deadline
M September 1  Labour Day
M September 8  Most formal graduate courses and seminars begin in the week of September 8 (1)
F September 12  Registration for September session ends; after this date, a late registration fee will be assessed
M September 15  Final date to submit PhD theses to SGS to avoid fee charges for 2008-2009
F September 19  Coursework must be completed and grades submitted for summer session courses and extended courses
W September 24  Summer Session grades available for viewing by students on the Student Web Service
F October 3  Final date for receipt of degree recommendations and submission of any required theses for master’s degrees for Fall Convocation
F October 3  Final date to submit final PhD thesis for Fall Convocation
F October 3  Final date to add full year and September session courses (4)
M October 13  Thanksgiving Day
F October 31  Final date to drop September session full- or half-courses without academic penalty
November  Fall Convocation information and dates are posted at www.utoronto.ca/convocation, choose Fall
December  For last day of classes before Winter break, consult graduate units concerned

2009

M January 5  Most formal graduate courses and seminars begin in the week of January 5 (1)
F January 9  Final date for registration of students beginning program in January session; after this date, a late registration fee will be assessed
T January 13  Final date to submit PhD theses without fee payment for January session
F January 16  Coursework must be completed and grades submitted for September session courses (2)
F January 16  Final date to add January session courses (4)
W January 21  September session grades available for viewing by students on the Student Web Service
F January 30  Final date for receipt of degree recommendations and submission of any required theses for March or June graduation for master’s students without fees being charged for the January session (3)
F January 30  Final date for all students to request that their degrees be conferred in absentia in March
F January 30  September dual registrants must be recommended for the master’s degree by this date to maintain their PhD registration (3)
F February 27  Final date to drop full year or January session courses without academic penalty (4)
March  March graduation in absentia information is posted at www.utoronto.ca/convocation, choose March in absentia
F April 10  Good Friday
F April 24  For students obtaining degrees at June Convocation, course work must be completed and grades submitted for full year and January session courses
### Academic Calendar

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<th>Event</th>
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<tr>
<td>F April 24</td>
<td>Final date for submission of final PhD thesis for students whose degrees are to be conferred at the June Convocation</td>
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<tr>
<td>F April 24</td>
<td>Final date for degree recommendations of January dual registrants for the master's degree to maintain their PhD registration</td>
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<td>May</td>
<td>For first day of summer classes, consult graduate unit concerned</td>
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<td>F May 8</td>
<td>Final date for registration for May session</td>
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<td>F May 15</td>
<td>Final date to enrol in May-June or May-August session courses</td>
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<td>F May 15</td>
<td>Course work must be completed and grades submitted for full-year and January session courses (except for extended courses) (2)</td>
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<tr>
<td>M May 18</td>
<td>Victoria Day</td>
</tr>
<tr>
<td>W May 20</td>
<td>January Session grades available for viewing by students on the Student Web Service</td>
</tr>
<tr>
<td>June</td>
<td>Spring Convocation Information and Dates are posted at: <a href="http://www.utoronto.ca/convocation">www.utoronto.ca/convocation</a>, choose Spring</td>
</tr>
<tr>
<td>F June 5</td>
<td>Final date to drop May/June F section courses without academic penalty</td>
</tr>
<tr>
<td>F June 26</td>
<td>Final date for registration for July-August courses</td>
</tr>
<tr>
<td>F June 26</td>
<td>Final date to drop May-August session Y section courses without academic penalty</td>
</tr>
<tr>
<td>W July 1</td>
<td>Canada Day Holiday</td>
</tr>
<tr>
<td>F July 24</td>
<td>Final date to drop July-August S section courses without academic penalty</td>
</tr>
<tr>
<td>F July 24</td>
<td>Coursework must be completed and grades submitted for May/June F Section Courses (2)</td>
</tr>
<tr>
<td>W July 29</td>
<td>Grades for May/June F Section Courses available for viewing by students on the Student Web Service</td>
</tr>
</tbody>
</table>

**Notes**

1. The precise dates of commencement of courses are determined by the graduate units; students are urged to contact the relevant graduate units for information. The University policy states that the first day of classes in the September session in all teaching divisions should not be scheduled on the first and second days of Rosh Hashanah (from 1 1/2 hours before sunset on Monday, September 29 to about 1 1/2 hours after sunset on Wednesday, October 1) or on Yom Kippur (from about 1 1/2 hours before sunset on Wednesday, October 8 to about 1 1/2 hours after sunset on Thursday, October 9).  

2. Graduate units may establish earlier deadlines for completion of course work and may prescribe penalties for late completion of work and for failure to complete work, provided that these penalties are announced at the time the instructor makes known to the class the methods by which student performance shall be evaluated.  

3. For final dates for completing degree requirements, students should consult their own departments.  

4. Graduate units may establish earlier deadlines to add/drop courses. Please note that the last date to cancel a course or registration with no academic penalty is not the same as the last date to be eligible for a refund.
Divisional Structure

The graduate units (departments, centres, and institutes) are allocated into four divisions. Collaborative (interdisciplinary) Programs are designated as (CP); Joint programs are designated as (JP).

Division I - The Humanities

Ancient and Medieval Philosophy (CP)
Ancient Greek and Roman History (CP)
Art
Book History and Print Culture (CP)
Cinema Studies
Classics
Comparative Literature
Drama
East Asian Studies
Editing Medieval Texts (CP)
English
French Language and Literature
Germanic Languages and Literatures
History
History and Philosophy of Science and Technology
Jewish Studies (CP)
Italian Studies
Linguistics
Medieval Studies
Museum Studies
Music
Near and Middle Eastern Civilizations
Philosophy
Religion
Slavic Languages and Literatures
South Asian Studies (CP)
Spanish
Women and Gender Studies
Women and Gender Studies (CP)

Division II - The Social Sciences

Adult Education and Counselling Psychology
Anthropology
Architecture, Landscape, and Design
Asia-Pacific Studies (CP)
Community Development (CP)
Comparative, International and Development Education (CP)
Criminology
Curriculum, Teaching and Learning
Developmental Science (CP)
Dynamics of Global Change (CP)
Economics
Ethnic and Pluralism Studies (CP)
European, Russian, and Eurasian Studies
Financial Economics (JP)
Geography
Human Development and Applied Psychology
Industrial Relations and Human Resources
Information Studies
International Relations (CP)
Law
Management
Management and Economics (CP)
Political Science
Public Policy and Governance
Sexual Diversity Studies (CP)
Social Work
Sociology
Sociology and Equity Studies in Education
Theory and Policy Studies in Education
Division III - The Physical Sciences

Advanced Design and Manufacturing (JP)
Aerospace Science and Engineering
Astronomy and Astrophysics
Astrophysics (CP)
Biomedical Engineering
Biomedical Engineering (CP)
Chemical Engineering and Applied Chemistry
Chemistry
Civil Engineering
Computer Science
Electrical and Computer Engineering
Environment
Environment and Health (CP)
Environmental Engineering (CP)
Environmental Studies (CP)
Geology
Geology and Physics (CP)
Knowledge Media Design (CP)
Materials Science and Engineering
Mathematical Finance
Mathematics
Mechanical and Industrial Engineering
Optics (CP)
Physics
Statistics
Theoretical Astrophysics

Division IV - The Life Sciences

Aboriginal Health (CP)
Addiction Studies (CP)
Aging, Palliative and Supportive Care Across the Life Course (CP)
Biochemistry
Bioethics (CP)
Biomedical Toxicology (CP)
Biomolecular Structure (CP)
Biotechnology (JP)
Cardiovascular Sciences (CP)
Cell and Systems Biology
Dentistry
Developmental Biology (CP)
Doctor of Medicine/Doctor of Philosophy
Ecology and Evolutionary Biology
Exercise Sciences
Forestry
Genome Biology and Bioinformatics (CP)
Global Health (CP)
Health Care, Technology, and Place (CP)
Health Policy, Management and Evaluation
Health Services and Policy Research (CP)
Immunology
Laboratory Medicine and Pathobiology
Medical Biophysics
Medical Science
Molecular Genetics
Neuroscience (CP)
Nursing Science
Nutritional Sciences
Occupational Science and Occupational Therapy
Pharmaceutical Sciences
Pharmacology and Toxicology
Physical Therapy
Physiology
Psychology
Public Health Sciences
Rehabilitation Science
Speech-Language Pathology
Women's Health (CP)
General Regulations

Exemptions
The Council of the School of Graduate Studies has the power to waive the application of a regulation in individual cases. Such exemptions are granted only in exceptional circumstances and require the favourable recommendation of the graduate unit and of the School of Graduate Studies Admissions and Programs Committee.

Introduction
The University of Toronto began in 1827 as King's College at York, then the name of Toronto. Although master's degrees were being awarded by the middle of the nineteenth century, and the doctorate was established in the 1890s, the School of Graduate Studies did not become a distinct academic division within the University of Toronto until 1922. In 1965 the School was reorganized and expanded. Today it comprises about 80 departments, centres, and institutes, offering approximately 150 different graduate programs.

Most graduate units, although large enough to have a diversity of graduate courses, are small enough to allow students to have a sense of belonging to a recognized community of scholars, colleagues, and friends. The goal of graduate studies at the University of Toronto is to provide students with the best material and human resources to learn the methods and standards of research necessary to work professionally at the frontiers of knowledge. Research is central to graduate studies, particularly at the doctoral level. Research-oriented training conveys the importance of keeping pace with a subject, the knowledge of which is always changing. It fosters intellectual curiosity and a creative response to problems. It encourages the student to communicate original discoveries effectively.

In the educational process, the graduate student comes to grips with the phenomenon of emerging knowledge. The process enriches the individual as well as the community participating in the exercise. The training and experience is valuable for all areas of work, whether one is teaching in a university, working in government, industry, private enterprise, or pursuing a professional career. Research-oriented graduate training provides the means to embark on a lifelong voyage of intellectual discovery, an opportunity and challenge that gives graduate studies pre-eminence in formal education.

Organization of the School of Graduate Studies
The School of Graduate Studies is responsible for the oversight of all graduate programs in the University of Toronto and for developing and implementing appropriate regulations and operating procedures for admissions, programs of study, and completion of degree requirements. Individual graduate units are responsible for maintenance of the official academic records of graduate students.

According to its Constitution, the School of Graduate Studies is governed by a Council and is organized into four divisions. Each of the departments, centres, and institutes (referred to generally as graduate units) belongs to one of the divisions.

The Divisions
Division I – Humanities
Division II – Social Sciences
Division III – Physical Sciences
Division IV – Life Sciences
General Regulations

Graduate Education Council

- The Graduate Education Council is an academic advisory body reporting to the Governing Council of the University of Toronto. The Council consists of 35 elected members and numerous ex-officio members. Each division elects five faculty members and three students to the Council; the President of the Graduate Students’ Union is an ex-officio member. There are three administrative staff seats. The Council is chaired by the Dean.

- The Council is primarily responsible for determining policies and regulations affecting the administration and operation of graduate studies, and for advising Governing Council on initiatives in graduate studies. The Council is concerned with the quality of graduate education across the university as a whole.

Graduate Units

- Graduate units (including departments, centres, and institutes) offer degree programs and courses and conduct research.

- Each graduate student is enrolled in one of the graduate departments/centres/institutes which offer graduate study. Interdisciplinary studies may be undertaken within collaborative programs, but a student must first register in a home graduate unit. The graduate unit is responsible for ensuring that each student is admitted and enrolled in an appropriate program of studies and is responsible for thesis/research supervision in conformity with the policies and procedures of the School of Graduate Studies.

- The Coordinator of Graduate Studies is responsible for the administration of graduate affairs within the unit, under the direction of the chair or director.

School of Graduate Studies Centres and Institutes

- The centres and institutes within the School of Graduate Studies have two major roles: the creation and development of graduate interdisciplinary programs of teaching and of research, and the fostering of new disciplines where these cannot proceed easily within the existing University structure.

- Some centres and institutes do not offer degree programs in their own areas, but offer teaching through seminars and through the sponsorship of collaborative programs.

- The list of SGS Centres and Institutes is available at www.sgs.utoronto.ca/gradadmin/admin/centres.asp.

Graduate Programs

- Graduate programs are listed alphabetically in the Graduate Programs section of this Calendar. They are also described on the University of Toronto Web site at www.gradschool.utoronto.ca.

Degree Programs

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

Collaborative Programs

- The School of Graduate Studies currently offers more than 35 graduate collaborative programs. Collaborative programs emerge from cooperation between two or more graduate units. The collective experience of the participating graduate units provides the student with a broader base from which to explore a novel interdisciplinary area or some special development in a particular discipline.

- The student must be admitted to, and enrol in, one of the collaborating graduate units and must fulfill all the requirements for the degree in the home unit and any additional requirements of the collaborative program. Each collaborative program is designed to allow a focus in the area of specialty. On successful completion of the program, the student receives a transcript notation.

Combined Programs

- The University of Toronto offers a number of combined programs involving two existing degree programs in different disciplines. The combination may comprise two graduate programs or a graduate and an undergraduate program. In most cases, the combination involves at least one professionally oriented program.

Diploma Programs

- A limited number of graduate diploma programs are offered.

Conjoint Programs

- The University of Toronto and the Toronto School of Theology offer a limited number of graduate conjoint programs.

Joint Programs

- The University of Toronto participates in three joint degree programs involving collaboration between two or more graduate units or universities.

Graduate Faculty

- Responsibility for directing all elements of graduate teaching and supervision rests with members of the graduate faculty.

- Appointments to the graduate faculty are made by the chairs and directors of the graduate units in the School. Appointments are made in one of three categories: associate member, full member, member emeritus.

- Graduate faculty membership permits an instructor to perform specified functions. An associate member may generally be permitted to teach graduate courses, supervise master’s theses, assist in the supervision of doctoral theses and serve as a voting member of a final oral examination but not as chair. A full member may perform all duties of an associate member as well as act as major supervisor of a doctoral thesis and chair of a final oral examination. A member emeritus may be permitted to chair a final oral examination and carry out one or more of the
duties of a full member. Members emeriti may continue to serve as major supervisor of a doctoral or master’s thesis but only take on new supervision with the approval of the graduate chair or director.

Student Categories

The University offers admissions to two categories of graduate students: Degree or Diploma Student and Special (non-degree) Student.

Degree or Diploma Student

A degree or diploma student is registered in a graduate program in the School of Graduate Studies. A degree student who has completed all requirements for the PhD degree exclusive of thesis research will be designated as a doctoral candidate in the School of Graduate Studies.

Degree or Diploma Student on Probation

When credentials are from a university where the program of study cannot readily be appraised by the graduate unit, the applicant may be required to register on probation for a period of at least 4 months and not more than 12 months. Applicants must hold a recognized degree with appropriate standing.

After 4 months, but before the end of 12 months, the graduate unit may wish to recommend to the School that the student's probationary status be removed. Work completed during the period on probation will be credited towards the degree program. Students whose probationary status is not removed may remain registered on probation for the remainder of the academic year but will not be permitted to continue after that.

Special (non-degree) Student

Two categories of Special Students are described below. Special Students are not enrolled in a program of study which may lead to a degree. All Special Students must be enrolled in at least one graduate course; some may be enrolled in both undergraduate and graduate courses.

Special Student—Full Time

Students who are changing disciplines or require preparatory work may be admitted as full-time Special Students and enrol in a full-time program of study not leading to a degree.

Special Student—Part Time

Students wishing to take one or two graduate courses not for degree credit are admitted as part-time Special Students. Those accepted with less than mid-B standing may not apply for admission to a degree program at a later date.

Admission Standards and Procedures

The School's admission standards and procedures are designed so that students entering a graduate program may normally have the capacity and preparation necessary to meet the challenge of the program effectively. The regulations for admission specify minimal requirements only. Many graduate units have additional requirements. Meeting the minimal requirements of the graduate unit and the School does not guarantee admission.

The University reserves the right to determine whether or not credentials of other degree-granting institutions meet the standards for admission to University of Toronto programs. Admissions decisions are final and are not appealable.

The University may confer upon a person more than one graduate degree having the same title provided the degrees are completed in different fields of study.

Academic Requirements for Admission

Master’s Programs

1. An appropriate four-year University of Toronto bachelor's degree, or its equivalent from a recognized university, is required. Under exceptional circumstances, for applicants with a three-year degree, equivalency may be demonstrated, for example, through relevant work experience or additional qualifications.
2. High academic standing equivalent to a University of Toronto mid-B or better, normally demonstrated by an average grade in the final year or over senior courses, is required.
3. At least two letters of reference are required.
4. Other qualifications as may be specified by a graduate unit.

Doctor of Philosophy Programs

1. An appropriate University of Toronto master's degree, or its equivalent from a recognized university, is required. Direct entry from a four-year bachelor's degree to a PhD program is also available when permitted by the graduate unit. See also Admission Requirements under Degree Regulations.
2. An average grade equivalent to a University of Toronto B+ or better in a previous master's degree program. Where relevant, demonstrated research competence equivalent to at least a B+ grade will be considered. For direct entry applicants, an average grade equivalent to a University of Toronto A- or better in courses in the relevant discipline.
3. At least two letters of reference are required.
4. Other qualifications as may be specified by a graduate unit.

Other Doctoral Programs

1. Normally, an appropriate University of Toronto master's degree, or its equivalent from a recognized university, is required. See appropriate graduate unit entry for specific details.
General Regulations

2. An average grade equivalent to a University of Toronto B+ or better in master's courses. Where relevant, demonstrated research competence equivalent to at least a B+ grade will be considered.
3. At least two letters of reference are required.
4. Other qualifications as may be specified by a graduate unit.

Applicants who graduated five or more years ago but without achieving sufficiently high standing for admission to the School may be considered for admission if, since graduation, they have done significant, intellectual work and/or made a significant professional contribution which can be considered equivalent to a higher academic standing. This contribution and its impact on the profession must be detailed and documented (e.g., publications, research, professional advancement, development of new skills, responsibility, etc.) and presented as part of the application. Such applicants may be considered for admission if they have achieved qualifications at least equivalent to those stated in the preceding sections and if a graduate unit so recommends.

Special Student Programs
Special Students must submit an application for admission for each academic year of study.

Applicants accepted as Special Student–Full Time must have completed an appropriate University of Toronto four-year bachelor's degree or its equivalent from a recognized university. They must have attained an average grade in the final year (or over senior courses) equivalent to mid-B or better.

Applicants accepted as Special Student–Part Time must hold an appropriate University of Toronto four-year bachelor's degree, or its equivalent, from a recognized university. Before applying, applicants should specify the courses they wish to take and obtain approval from the teaching graduate unit or graduate units.

Those accepted with less than mid-B standing may not apply for admission to a degree program at a later date.

Courses Taken as a Special Student
On the recommendation of the graduate unit, and with the School's approval, graduate courses taken as a Special Student may count for up to one full-course equivalent or 25% of the course requirements for the degree, whichever is greater, in a subsequent degree program at this University, provided that they have not already been credited towards another degree, diploma, certificate, or any other qualification. With the approval of the graduate unit, they may serve to satisfy prerequisite requirements. Special Students programs must include at least one graduate course. Any tuition fees paid as a Special Student cannot be transferred to a subsequent degree program.

English Language Facility
It is essential that all incoming graduate students have a good command of English. Facility in the English language must be demonstrated by all applicants educated outside Canada whose primary language is not English. This is a requirement of admission and should be met before application, but must be met before an offer of admission is made. This requirement may be satisfied using one of the following tests. Test results that are older than two years at the time of application cannot be accepted. The applicant must retake the English language facility test. Minimum scores are shown; however, many graduate units require a higher score, and applicants should consult the graduate unit to determine whether a higher minimum score applies.

Test of English as a Foreign Language (TOEFL)
Educational Testing Service
P. O. Box 6151
Princeton, New Jersey
U.S.A., 08541-6151
Web: www.toefl.org
TOEFL Minimum Score Requirements

Consult the department to which you are applying to determine if a higher minimum score is required.

<table>
<thead>
<tr>
<th>ACADEMIC DIVISION</th>
<th>Paper-Based Test and TWE</th>
<th>Computer-Based Test and Essay Rating</th>
<th>Internet-Based Test and Writing and Speaking Sections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities</td>
<td>Overall score 580 TWE 5</td>
<td>Overall score 237 Essay Rating 5</td>
<td>Overall score 93 Writing 22 Speaking 22</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>Overall score 580 TWE 5</td>
<td>Overall score 237 Essay Rating 5</td>
<td>Overall score 93 Writing 22 Speaking 22</td>
</tr>
<tr>
<td>Physical &amp; Engineering Sciences</td>
<td>Overall score 580 TWE 4</td>
<td>Overall score 237 Essay Rating 4</td>
<td>Overall score 93 Writing 22 Speaking 22</td>
</tr>
<tr>
<td>Life Sciences</td>
<td>Overall score 580 TWE 5</td>
<td>Overall score 237 Essay Rating 5</td>
<td>Overall score 93 Writing 22 Speaking 22</td>
</tr>
</tbody>
</table>

The TOEFL examination is offered in three formats: the traditional paper-based format (only offered on specific dates in a limited number of countries), the computer-based format (offered year-round), and the internet-based format (offered year-round). Applicants registering for the paper-based TOEFL must include the Test of Written English (TWE) component. The internet and computer-based tests include a component similar to the TWE; the internet-based test also includes a speaking section. All applicants must satisfy the minimum TOEFL score requirements set by each of the four SGS academic divisions listed in the accompanying chart.

Michigan English Language Assessment Battery (MELAB)
English Language Institute (ELI)
University of Michigan
Ann Arbor, Michigan
U.S.A., 48109-1057
Web: www.lsa.umich.edu/eli/melab.htm
Required score: 85

International English Language Testing System (IELTS)
University of Cambridge Local Examinations Syndicate
1 Hills Road
Cambridge, U.K.
CB1 2EU
Web: www.ielts.org
Applicants may also contact their nearest British Council Office. Please note that applicants must take the academic module of this test.
Required score: 7.0

The Certificate of Proficiency in English (COPE)
COPE Testing Limited
429 Danforth Avenue
P.O. Box 462
Toronto, Ontario
M4K 1P1
E-mail: info@copetest.com
Web: www.copetest.com
Required score: 76 minimum total with at least 22 in each component and 32 in writing

International ESL-Academic Preparation Level 60 (Advanced)
School of Continuing Studies
University of Toronto
158 St. George Street
Toronto, Ontario
M5S 2V8
E-mail: scs.registrar@utoronto.ca
Web: www.learn.utoronto.ca/esl
Required score: B

Eligibility of Senior Faculty Members
Members of the faculty of the University or its federated or affiliated colleges, senior in rank to Lecturer, are normally not eligible to be graduate students proceeding to a degree at the University of Toronto. Exceptions may be granted by the SGS Admissions and Programs Committee when it is confident that the graduate program is sufficiently remote from the faculty member that academic impartiality is not compromised.
Application for Admissions to a Degree Program

Procedures
1. Formal application for admission should be submitted using the Online Application accessible through the graduate units. Applicants must pay an application fee of $100. Some graduate programs have set higher application fees—see Payment options: (a) online using a credit card; (b) by mail using one of two methods: (i) certified cheque or money order in Canadian funds made payable to the University of Toronto; (ii) Master Card or Visa credit card. No decision on the application will be sent to the applicant until this fee has been paid.
2. Applicants must arrange to have one official copy of their complete academic records from all universities attended included with their application. Letters of reference are also required. Individual graduate units may require further documentation.
3. Certified English translations of all international documentation written in a language other than English or French must also be submitted.

Application Deadlines
The graduate unit determines the date by which applicants should submit their applications, supporting documentation, and at least two letters of reference to be assured that they will be considered for a place in the program of their choice and for financial support. Applications received after the posted date will be considered if places and awards are still available, but early application is recommended.

For specific information on application and financial support deadlines, contact the graduate unit offering the program to which you are applying.

Earlier submission is recommended for applications from outside Canada to ensure timely arrival, particularly where special documentation (and/or translation) and proof of English language facility are required.

Not all graduate units offer January admission. Consult the graduate unit concerned for more information.

Financial Assistance
For detailed information about fellowships, see calendar section titled Fees and Financial Support.

Acceptance
1. Applications for admission are decided by the graduate unit. The official acceptance letter is issued by the School of Graduate Studies. Admissions decisions are final and are not appealable.
2. Applicants who are offered acceptance pending receipt of final transcripts must submit one official copy of their final transcripts to the graduate unit before final acceptance can be approved. If final transcripts do not indicate that the expected degree has been conferred, official documentation indicating the anticipated date of degree conferral must be submitted before registration.
3. Normally students accepted to the School of Graduate Studies must commence their program of study on the date specified in their letter of acceptance. If circumstances prevent a student from starting study on the specified date, the graduate unit may decide that the offer of admission be valid for a period not to exceed 12 months from the original commencement date. In such a case, an official transcript will be required to document any new study completed in the interim. If the period exceeds 12 months from the original date of expected commencement, a new application must be submitted.
4. If the graduate unit approves, students accepted to begin their programs in September will be permitted to start the preceding summer. Students taking courses during the summer will pay the Summer Session fee (academic and incidental), which is additional to the Fall and Winter Session fee. Students engaged only in research do not pay Summer Session fees.

Structure of Academic Programs

Academic Year
In the School of Graduate Studies, the academic year begins in September and ends in August. The academic year is divided into three sessions: the Fall Session from September to December, the Winter Session from January to April, and the Summer Session from May to August.

Academic Programs
Academic programs leading to graduate degrees are defined by the units which offer them and by the degree regulations found in the Graduate Programs section for the EdD, PhD, MA/MSc, MAsc., MEd, MEng, and MHSc. For other degrees, consult the relevant graduate unit listing in the Graduate Programs section of this Calendar or on the Web at www.sgs.utoronto.ca.

Minimum Period of Registration (formerly Program Length)
All academic programs specify a minimum period of registration defined as the shortest length of time a student must be registered in that program on a full-time basis in order to qualify for the degree. This period also establishes the minimum degree fee students must pay.

Residence
Many programs specify a period of residence during which the student is required to be on campus and consequently in such geographical proximity as to be able to participate fully in the university activities associated with the program. Residence provides the student with an opportunity to become immersed in the intellectual environment of the university.
Full-time Studies

Full-time graduate students are defined according to government regulations as follows:
1. They must be pursuing their studies as a full-time occupation and identify themselves as full-time graduate students.
2. They must be designated by the University as full-time students.
3. They must be geographically available and visit the campus regularly.
4. They must be considered to be full-time students by their supervisors.
5. If an academic program requires an absence from the University, students must apply through their graduate unit for permission to be off campus.

Part-time Studies

From first registration, part-time studies are permitted in those master's degree programs offering a part-time program.

Students wishing to take one or two courses not for degree credit are admitted as part-time Special Students, in any session.

Time Limits

All degree requirements must be completed within a specific period of time. See Degree Regulations and Lapsed Status section below.

Registration Policies and Procedures

Registration Procedures

Graduate students are required to register at the beginning of each session they wish to attend. New graduate students will receive registration instructions prior to the registration dates listed in the Academic Calendar. Students may access Registration Instructions on the Web at www.sgs.utoronto.ca.

Students registering in programs offered by the Ontario Institute for Studies in Education of the University of Toronto (OISE/UT) should consult OISE/UT for information.

For the Fall and Winter Sessions, registration material and a Fees Invoice are sent to the student's mailing address. Every effort is made to ensure that only students who are eligible to register receive registration material. However, receiving it does not override any other notification students receive about academic status and eligibility. New students who have received a conditional offer of admission should make arrangements with their graduate unit to clear conditions as soon as possible. The first step to registration is the payment of fees or arrangements to pay such fees. The second step is the presentation of the fees receipt to the graduate unit and collection of a School of Graduate Studies Handbook.

A student is considered to be registered as soon as academic and incidental fees are paid or arrangements for deferral of fees payment have been made.

Summer Session Courses

All students, whether attending formal courses or engaging in research or project work, must register for the Summer Session. Summer Session registration instructions are usually sent to the student's current address or to the graduate unit in April. Doctoral, MSc, and MASc: students register for the September-August or January-August period when they first register in September or January, and therefore are already registered for the Summer Session.

In addition to a large program of research supervision and independent study, the School of Graduate Studies offers a limited number of graduate courses for credit towards higher degrees during the summer. Many undergraduate courses will also be available for persons requiring prerequisite work in order to enter graduate programs. Students should consult the undergraduate calendars of the faculties of interest.

Summer courses are equivalent to those offered during the Fall and Winter Sessions but vary in duration and thus in frequency of meeting. Some courses will last 12 to 14 weeks while others will meet for only 7 weeks. In some cases, prerequisite courses will be six weeks long.

For persons attending the May-August session, the maximum possible load is two full courses. The maximum load in the May-June or July-August period is one full course or equivalent.

First Registration

Students beginning their degree programs normally register for the first time in September. In some cases graduate units may give permission for new students to start their programs either in January, May, or July.

Continuity of Registration

Failure to register as required will cause a student’s registration to lapse. See Lapsed Status below.

Doctoral Students

Doctoral students must register annually until all degree requirements have been fulfilled.

Full-Time Master's Students

Once they have first registered, full-time master's students, in other than course-work only programs, must register annually in September until all degree requirements have been completed.

Full-time master's students in course-work only programs must register initially for the minimum registration period and thereafter for each session in which they are completing requirements for the degree. All full-time master's students who have completed the minimum period of registration may not register as part-time students.

Prior to completing all courses in a course-work only program, and with the permission of their graduate unit, master's students admitted to a full-time program may ‘stop out’ between sessions. However, no change is made to the time limit for completing the degree.
Part-Time Master’s Students
Master’s students proceeding to their degree on a part-time basis register in those sessions in which they are completing course requirements for the degree. When all course requirements have been completed, they must register annually until all other requirements have been completed.

Master’s students are advised to consult their graduate units for further information on continuity of registration requirements, particularly with regard to the Summer Session; many graduate units expect their students to be registered for all three sessions.

Students are reminded that there are time limits for all degree programs.

Late Registration Fee
Since it is the student’s responsibility to ensure that proper registration is completed on time, late registration will be subject to an additional fee as specified in the Fees and Financial Support section of this Calendar.

Failure to Register
Students will not receive credit for work completed during a session in which they have not registered.

Extension of Time for Completion of Degree Requirements
In exceptional circumstances, a degree student who has failed to complete all the requirements for the degree within the period specified in the degree regulations may be considered for a maximum of two one-year extensions provided that the graduate unit concerned so approves. To apply for an extension, the student must present to the graduate unit concerned the causes for the delay and evidence that the remaining degree requirements may be completed within the period of the extension request. See also section under Degree Regulations, Doctor of Philosophy, Program Requirements, titled Time for Completion of Program Requirements.

Lapsed Status
If a student or candidate fails to register, or is not permitted to register because the time limit for the degree sought has elapsed, registration in the School lapses. Normally, students or candidates whose registration has lapsed may not make demands upon the resources of the University, attend courses, or expect advice from their supervisor. There are two states of lapsed status, as noted below.

Before the Time Limit for the Degree has Expired
Failure to register as required within the time limit specified for the degree sought will result in lapsed status. An application for reinstatement is required and must be approved both by the graduate unit and the School, and payment is made of the prescribed fees for the year(s) in which the student or candidate failed to register.

After the Time Limit for the Degree has Expired
After the time limit for the degree has elapsed and further extensions cannot be recommended, a candidate may not register further and registration in the program is considered to have lapsed. In special circumstances, a candidate may be reinstated once only, for a maximum of 12 months. See Time for Completion of Program Requirements section in the PhD regulations. These regulations apply by analogy to master’s students including those who have outstanding requirements other than a thesis.

Simultaneous Registration
Simultaneous registration in two full-time programs is not permitted. With the consent of both graduate units concerned, or of the graduate unit and another faculty or school, and written notification to the School of Graduate Studies, simultaneous registration in a full-time program and a part-time program may be permitted. Two part-time registrations in different programs may also be permitted. Students are responsible for the fees charged for both programs.

Dual Registration
A student in a master’s program at this University who has been offered admission to a PhD program conditional on completion of the master’s program, may be a dual registrant for only one session in both programs under the following conditions.

1. A minimal amount of work remains to complete the requirements for the master’s degree. A student may enrol in a maximum of one half-course for the master’s program in the one session of dual registration with the approval of the graduate unit.
2. Permission has been granted by the graduate unit.
3. The student will be engaged in full-time PhD studies and will be registered full-time in the PhD and part-time in the master’s program. Only the appropriate PhD fees will be charged.
4. The period of dual registration will be either September 1 to January 31 or January 1 to April 30.

In order to receive credit for the PhD for the period as a dual registrant, the student must be recommended for the award of the master’s degree by January 31 for September dual registrants, or by April 25 for January dual registrants. Otherwise, the PhD registration will be cancelled, no credit for the PhD will be allowed, and the student will continue to be registered as a master’s student only. An appropriate fees adjustment will be made so that the student will be charged fees only as a master’s student. PhD course credit will be retained for courses completed in the period of dual registration provided the graduate unit has informed the School.

Students who are not recommended for the master’s degree by the deadline and whose enrolment in the PhD is thereby cancelled may not apply for dual registration a second time. They must successfully complete the requirements for the master’s degree before registering in the PhD program.
Leave Policy

Graduate students whose programs require continuous registration may apply to their Graduate Coordinator for a one-session to three-session leave during their program of study for:

1. serious health or personal problems which temporarily make it impossible to continue in the program, or
2. parental leave by either parent at the time of pregnancy, birth or adoption, and/or to provide full-time care during the child's first year. Parental leave must be completed within twelve months of the date of birth or custody. Where both parents are graduate students taking leave, the combined total number of sessions may not exceed four.

Once on leave, students will neither be registered nor will they be required to pay fees for this period. In general, students on leave may not make demands upon the resources of the University, attend courses, or expect advice from their supervisor. As an exception, students on leave for parental or serious health reasons who wish to consult with their supervisor or other faculty are advised to make special arrangements through their department. Students on leave will not be eligible to receive University of Toronto fellowships support. In the case of other graduate student awards, the regulations of the particular granting agency apply.

Students may make application for a leave by completing the Leave Request Form and submitting it to their Graduate Coordinator for approval. The form is then sent to the School of Graduate Studies for processing. The termination date of the degree program will be extended by the duration of the leave taken, i.e., one, two, or three sessions as appropriate. Except for parental leave or in exceptional circumstances, it is not expected that a student will be granted more than one leave under the terms of this policy. Normally the start and finish of the leave would coincide with the start and end of a session. When students require a leave to begin in mid-session, they are advised to contact the Director of Student Services at the School of Graduate Studies to make special arrangements.

Leave requests that do not fall under the terms of this policy will require final approval from the School of Graduate Studies.

Withdrawal from a Graduate Program

In order to withdraw from a program, students must submit a Program Change Form to the School of Graduate Studies and return student cards to the School. Withdrawal from a graduate program should be reported immediately to the School. A rebate of fees, if any, will be determined by the date on which written notification of withdrawal is received by the School. Any application for re-admission by a student who has withdrawn must be made in competition with all other applicants.

Students enrolled in course-work only degree programs who withdraw from all courses in which they are currently enrolled must withdraw from their programs. The School will approve recommendations from the graduate units that such students be eligible to re-register at any time within 12 months following withdrawal.

Enrolment Policies and Procedures

Graduate Courses

A graduate course is understood to require at least two hours per week of lectures or seminars plus such laboratory hours as may be required.

Enrolment

After registration, students enrol with their graduate units and arrange programs of study (courses, research topics, supervisors, and so on). Students should contact the graduate unit for enrolment procedures. Enrolment should be completed by the deadline noted in the Academic Calendar.

Most of the formal classes and seminars in the Fall Session begin in the week of September following the week in which Labour Day falls. However, starting dates are determined by the graduate units, and students are urged to contact the relevant graduate units for information.

Not every course will be given in any one year. Consult the graduate unit concerning course availability.

Deadlines for Enrolment Changes

Graduate units may establish earlier deadlines for course changes. Courses must be dropped by completing a Program Change Form or by using the Web service (if the department permits access). In order to avoid academic penalties, courses must be dropped by the following deadlines:

<table>
<thead>
<tr>
<th>Date</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct. 3, 2008</td>
<td>Deadline to add full courses (Y) and half-courses (H).</td>
</tr>
<tr>
<td>Oct. 31, 2008</td>
<td>Deadline to drop a Fall Session full course or half-course without academic penalty.</td>
</tr>
<tr>
<td>Jan. 16, 2009</td>
<td>Deadline to add Winter Session full courses (Y) and half-courses (H).</td>
</tr>
<tr>
<td>Feb. 27, 2009</td>
<td>Deadline to drop a full course (Y) or Winter Session half-course (H), or withdraw from a program without academic penalty.</td>
</tr>
</tbody>
</table>

Students enrolled in course-work only programs who drop all courses by the deadlines, must withdraw from the program. See Withdrawal from a Graduate Program, above.

Completion of Course Work and Grade Submission

Course work must be completed and grades submitted by the following dates:
General Regulations

### Course Work Extensions

Students are expected to meet the course deadlines both of the School and of the graduate units in which they are registered and are advised to plan their research projects accordingly. Students who find themselves unable to meet SGS deadlines for completing course work can, under certain conditions, receive extensions for completing the work after the date set by SGS.

**Petitions for course work extensions**

The authority to grant an extension for the completion of work in a course beyond the original SGS deadline for that course rests with the graduate unit in which the course was offered, not the instructor of the course. Students will petition the graduate unit for extensions, using a standard form provided by SGS.

The deadline for requesting an initial extension is the deadline for completion of course work and grade submission for courses offered in the relevant session, as specified in this calendar.

A student on extension who is unable to complete the required course work in the extension period specified by the graduate unit may apply to the graduate unit for a continuation of the extension (subject to the time-limits and deadlines for extensions, set out below); however, the student must make such a request before the expiry date of the extension period in place.

**Grounds for course work extensions**

Legitimate reasons for an extension can be academic in nature - e.g., unexpected problems of research in a course - or non-academic - e.g., illness. In order to ensure as much uniformity and fairness as possible in the granting of extensions (or continuations of extensions), the relevant graduate unit must be reasonably certain that:

- a) the student would not be placed in jeopardy the normal and satisfactory completion of new course work;
- a) the student would not be granted an unfair academic advantage over fellow students in the course;
- a) the student does have a reasonable chance of completing outstanding requirements within the time to be allotted.

**Time-limits for course work extensions**

If a graduate unit grants a petition for an extension, it must specify an extension period, which is not to run beyond the SGS deadline for completion of course work and grade submission following the original SGS deadline for the course. Thus, the deadlines for course extensions are as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>Course Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 15, 2009*</td>
<td>Fall/Winter Session (Y) and Winter Session (Y, H) courses</td>
</tr>
<tr>
<td>Sep. 18, 2009</td>
<td>Summer Session courses and extended courses</td>
</tr>
</tbody>
</table>

A graduate unit may grant a continuation of an extension that is already in place provided that it does not extend the total period of the extension beyond the foregoing deadlines.

Extensions beyond these deadlines will require the approval of both the graduate unit and the SGS Admissions and Programs Committee.

**Grade-reporting procedures**

The graduate unit will assign the temporary course report of 'SDF' ("Standing Deferred") to a student on extension, pending receipt from the instructor of a final course report. The final course report will take the form either of a regular grade or of the non-grade report ‘INC’ ("Incomplete"), as appropriate. It is due no later than the SGS deadline for completion of course work and grade submission following the original one for the course. If, by that date, a final grade is not available and the student has not submitted the outstanding course work, then the report of ‘SDF’ will be replaced by one of ‘INC’. This will be a permanent transcript entry. (Amendments will require the approval of the SGS Admissions and Programs Committee.)

**SGS and home graduate unit notification**

Graduate units are to notify SGS of extensions no later than the original deadlines for submitting grades for the relevant courses or, in case of continuations, no later than the expiry dates of the original periods of extension, providing in each case the new deadline for completion of course work.

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Jan. 16, 2009 | Fall Session (Y, H) courses
May 15, 2009* | Fall/Winter Session (Y) and Winter Session (Y, H) courses
Sep. 18, 2009 | Summer Session courses and extended courses

*For students receiving degrees at Spring Convocation, grades must be submitted by April 24.
A graduate unit should, in addition, notify the graduate unit in which the student is registered when it is not the same as the one granting the extension.

**Extra Courses Not Required for the Degree**

Graduate units may permit students to enrol in additional courses not required for the degree. Such courses must be so designated on the student's enrolment form. These courses are subject to the same regulations regarding withdrawal, failure, and failure to complete work as are courses required for the degree, except that repetition or replacement of failed or incomplete courses may be waived by the graduate unit.

**Prerequisite Courses**

At least B- is required in all prerequisite courses but some graduate units may require a higher average; students should consult the graduate unit in advance.

**Reading and/or Research Courses**

Reading and/or research courses should involve as much reading and work as a normal seminar or other type of graduate course; written work should be a requirement of the course. Reading and/or research courses are subject to the grading practices policy in the same way as any other course.

Only faculty holding a graduate appointment may direct a reading and/or research course, and they must hold a faculty appointment in the graduate unit where the course is being offered, normally in the student's home graduate unit. In general, both the student and instructor should be on campus and the frequency of their meeting should be consistent with other courses.

Approval to take a reading and/or research course is given by the graduate unit.

**Seminar/Workshop Courses**

Some graduate units offer seminar/workshop courses. These courses vary in format and delivery from unit to unit, and they may or may not count towards the number of courses required for the completion of a degree program. Consult the home graduate unit for details and program requirements.

**Auditing of Graduate Courses**

Graduate units determine if they wish to allow auditing of their courses and which groups of students and non-students specified in the University's Policy on Auditing of Courses they wish to allow. When auditing is allowed, the final decision to permit an individual to audit rests with the instructor of the course. In all cases, students registered in the University who wish to audit courses have priority over others. An auditor may attend lectures and other class meetings, take part in class discussions, and, when the appropriate fee is paid, receive written confirmation of attendance. An auditor will not receive evaluations of participation and will not be allowed to submit assignments or write examinations and tests except by special and express permission. Audited courses are not recorded on the student's official transcript. The University's Code of Student Conduct applies to auditors. Further information about access, Certificates of Attendance, and fees for auditing may be obtained from the graduate school's Office of the Director of Student Services.

**Good Academic Standing and Satisfactory Academic Progress**

To be in good academic standing, a student registered in a degree program in the School of Graduate Studies must:

1. comply with the General Regulations of the School as well as with the Degree Regulations and program requirements governing that degree program; and
2. make satisfactory progress toward the completion of the degree.

All degree students are admitted under the General Regulations of the School, described in the General Regulations section of this Calendar. The Degree Regulations for the various doctoral and master's degrees offered by the School are specified in the Degree Regulations section of this Calendar and in the Graduate Programs section, under the entry of the graduate unit offering the graduate program leading to the relevant degree. The specific requirements for the various graduate programs offered in the School are described under the entry of the graduate unit offering the program.

Failure to maintain good academic standing may result in various sanctions, including ineligibility for fellowships, lowest priority for bursaries and assistantships, and even termination. The School may terminate the registration and eligibility of a student:

1. who fails to comply with the General Regulations of the School, the relevant Degree Regulations, or the specific degree requirements of the graduate unit in which the student is registered or
2. who fails to maintain satisfactory progress in the degree program in which the student is registered, as measured either by the general standards of the School or by the specific ones of the graduate unit.

**Full-Time Studies**

Students registered as full-time students in the School of Graduate Studies must be engaged in their studies on a full-time basis, as required by government regulations for full-time graduate studies. (See "Full-time Studies", above.) A full-time student may be absent from the University for an extended period or may participate in a program offered by another university if and only if the student has received written permission from the graduate unit in which he or she is registered. A graduate student who, in a given session, is absent from the University without receiving prior approval may lose good academic standing. In exceptional cases, a graduate unit may recommend to the School the termination of the student's registration and eligibility.
Timely Completion of Graduate Program Requirements

Each graduate unit establishes specific requirements for degree programs, in addition to those of the School, as well as standards of satisfactory performance and progress. These requirements and standards are described in the appropriate entry in the Graduate Programs section of this Calendar and in material published separately by graduate units. Continuation in a degree program requires satisfactory progress toward the completion of that program. A student's progress in a degree program will be considered satisfactory only if the student satisfies and completes the various requirements for that degree in a manner consistent with the graduate unit's time line for completion of the degree. A graduate unit may recommend to the School that a student's registration and degree eligibility be terminated when a student fails to maintain satisfactory progress toward the completion of the degree.

Satisfactory Completion of Graduate Courses

Satisfactory performance in a degree program requires the completion of every course taken for graduate credit with a grade of at least a B-; some graduate units may require a minimum grade above a B- for some or all courses. If a student fails to complete a graduate course in a satisfactory manner (i.e., receives a grade report of 'FZ' or 'NCR' in a course, receives a grade report below the minimum acceptable by the graduate unit, or receives a non-grade report of 'INC'), then the graduate unit in which the student is registered may recommend to the School the termination of registration and eligibility of that student. If the student is permitted to continue, he or she must repeat the relevant course, or an alternative course recommended by the graduate unit and approved by the School, and obtain a satisfactory grade. (The report for the course that was not completed in a satisfactory manner as well as the report for the repeated or alternative course will appear on the student's academic record.)

Supervision and Satisfactory Progress in a PhD Program

A PhD student is expected, with the assistance of the graduate unit, to select a supervisor and, with the assistance of the supervisor and graduate unit, to constitute a supervisory committee, consisting of the supervisor and at least two other members of the graduate faculty, as early as practicable in the student's program but, in any case, no later than the time specified by the time frame established by the graduate unit. The student's choice of supervisor and supervisory committee is subject to the approval of the graduate unit in which the student is registered. A student who encounters difficulties setting up a supervisory committee should consult the chair/director or the graduate coordinator of the graduate unit in advance of the relevant deadline. A student who fails to constitute a supervisory committee by the required time may lose good academic standing.

A student is expected to meet with this committee at least once a year, and more often if the committee so requires. At each meeting, the supervisory committee will assess the student's progress in the program and provide advice on future work. If in each of two consecutive meetings, a student's supervisory committee reports that the student's progress is unsatisfactory, the graduate unit may recommend to the School the termination of registration and eligibility of that student. A student who encounters difficulties arranging a meeting of this committee should consult the chair/director or the graduate coordinator of the graduate unit in advance of the relevant deadline for doing so. A student who, through the student's own neglect, fails to meet with the supervisory committee in a given year will be considered to have received an unsatisfactory progress report from the committee.

Time Limit for Completion of Program Requirements in a PhD Program

A student enrolled in a full-time (as opposed to a flexible-time) PhD degree program will be denied further registration in that program and will have his or her eligibility terminated at the end of the third year of registration, in the case of a four-year program, or at the end of the fourth year of registration, in the case of a five-year program, if by that time either
1. the student has not completed all requirements for the degree exclusive of thesis research—including course requirements, language requirements, qualifying departmental examinations—or
2. the student does not have an approved thesis topic, supervisor, or supervisory committee.

Note: The foregoing time limit does not apply to courses that run continuously throughout the program, e.g., ongoing research seminar courses.

In exceptional circumstances, a student who has not met these requirements may be permitted to register in the program for two further sessions at the discretion of the graduate unit concerned. Continuation beyond two sessions will require the approval of both the graduate unit and the SGS Admissions and Programs Committee.

Completion of the program requirements identified above will signal the achievement of candidacy.
Academic Appeals

General

Graduate students may dispute substantive or procedural academic matters, including grades, evaluation of comprehensive examinations and other program requirements; decisions about the student’s continuation in any program; or concerning any other decision with respect to the application of academic regulations and requirements to a student. Decisions related to admission to an academic program, including admission to the doctoral program for current master’s students, are not subject to appeal. Appeals must be initiated within the student’s home graduate unit unless the appeal relates to a course outside the home unit, in which case, it must be initiated in the graduate unit in which the course was taken, upon notification to the student’s home graduate unit chair.

Exception

The process of academic appeal described in this policy must be followed for all disputes except appeals related to failure of a final PhD oral examination or related to termination of registration in a program. Such appeals must be made directly to the SGS Graduate Academic Appeals Board (GAAB). These appeals begin at Graduate Appeal Step 3. In some such cases, the Chair of GAAB may refer the appeal to the Graduate Department Academic Appeals Committee (GDAAC) for prior consideration and a recommendation to GAAB. The GDAAC does not have the right to overturn a failed final PhD oral examination result or a termination of registration, but may recommend that such a decision be considered further by GAAB.

Informal Mediation

At any stage prior to filing an appeal with the SGS Graduate Academic Appeals Board, a student may consult the relevant SGS Vice-Dean for advice and/or informal mediation. The Vice-Dean will serve as informal mediator, attempting to resolve the dispute or clarify issues. Timelines are not affected by mediation. Consultation with the Vice-Dean at an early stage is encouraged.

Steps

The overall graduate appeals process is set out in the table below. Students should note the timelines for each stage carefully.

Step 1 – Informal

In the case of dispute, students must first attempt to resolve the matter with the instructor or other person whose ruling is in question. Should the matter not be resolved with the instructor, and should the student wish to pursue the matter, the student must discuss the matter with the graduate coordinator or associate chair of the department.

Step 2 – Department-level Appeal

Should such discussions fail to resolve the matter, the student may make a formal appeal in writing to the Graduate Department Academic Appeals Committee (GDAAC). The student must complete a Notice of Appeal to the GDAAC; a copy of this Notice is available from the graduate coordinator or associate chair in every graduate department. This form must be completed and delivered to the chair of the department or the chair of GDAAC within the specified timeline of 8 weeks from the date of the decision under appeal. The Chair of the Committee will determine, at his or her sole discretion, whether the appeal will proceed by way of an oral hearing and/or written submissions. In either case, at the conclusion of the hearing and/or review of the written submissions, the GDAAC will make a recommendation to the chair of the graduate department regarding the merits of the appeal. The chair will then render the department-level appeal decision. Guidelines for chairs are made available to all parties in an appeal.

Step 3 – Appeal to GAAB

1. The student may appeal from the decision of the chair of the department by filing a Notice of Appeal to the SGS Graduate Academic Appeals Board (GAAB) within 8 weeks of the decision of the Chair.
2. Appeal to GAAB is the first step for a student who is making an appeal regarding the failure of the final PhD oral examination or termination of registration in a graduate program.

Step 4 – Governing Council Appeal

A decision of the Graduate Academic Appeals Board (GAAB) may subsequently be appealed by a student to the Governing Council’s Academic Appeals Committee, in accordance with its guidelines and procedures. An appeal to this Committee shall be commenced by filing a notice of appeal with its Secretary no later than ninety days after the date of the GAAB decision under appeal.
General Regulations

<table>
<thead>
<tr>
<th>STEPS AND TIMELINES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TIMELINE FOR STUDENT ACTION AT EACH STAGE</strong></td>
</tr>
<tr>
<td><strong>STEP</strong></td>
</tr>
<tr>
<td><strong>See Note A below</strong></td>
</tr>
<tr>
<td>1. <strong>Informal</strong></td>
</tr>
<tr>
<td>a. Student to instructor</td>
</tr>
<tr>
<td>b. Student to graduate coordinator</td>
</tr>
<tr>
<td>8 weeks from date of decision being appealed</td>
</tr>
<tr>
<td>2. <strong>Department-level Appeal</strong></td>
</tr>
<tr>
<td>Notice of Appeal to GDAAC¹</td>
</tr>
<tr>
<td>Note: Appeals related to failure of the final PhD oral examination or to termination of registration in a graduate program must be made directly to GAAB² – see Step 3b below.</td>
</tr>
<tr>
<td>3. <strong>SGS Appeal</strong></td>
</tr>
<tr>
<td>a. Notice of Appeal to GAAB²</td>
</tr>
<tr>
<td>b. Appeal begins here for students who wish to appeal failure of the final PhD oral examination or termination of registration in a graduate program.</td>
</tr>
<tr>
<td>90 days from decision of GAAB²</td>
</tr>
<tr>
<td>Notice of Appeal to GCAAC³</td>
</tr>
</tbody>
</table>

Note A: A student may apply, in writing and with reasons, for an extension of time. Such applications may be made to the Chair of GDAAC for department-level appeals or to the GAAB for SGS-level appeals. Any extension is within the discretion of the GDAAC Chair, or the GAAB, as appropriate, where the view is that compelling reasons exist. (Consult with the GCAAC Secretary regarding those guidelines and procedures).

Note B: Informal mediation is available via the SGS Vice-Dean at any stage before filing an appeal with the GAAB. Consultation with the Vice-Dean at an early stage is encouraged.

Note C: The chair of the appeal body retains discretion to extend time limits applicable to its response at any stage where, in its view, compelling reasons exist.

¹ Graduate Department Academic Appeals Committee
² Graduate Academic Appeals Board
³ Governing Council Academic Appeals Committee

**Policies**

Important School of Graduate Studies policies affecting graduate students are included in the SGS Calendar. However, there are numerous additional policies and guidelines affecting graduate studies. These appear on the SGS Web site at www.sgs.utoronto.ca/current/policies/index.asp. Furthermore, University of Toronto-wide policies affecting students are posted at www.governingcouncil.utoronto.ca/policies.htm.

**Graduate Grading and Evaluation Practices Policy**

There are currently two grading policies affecting graduate students: the Graduate Grading and Evaluation Practices Policy (GGEPP) and the University Grading Practices Policy (UGPP). Both are under review. The text of the GGEPP is provided here. The university-wide policy is accessible at www.governingcouncil.utoronto.ca/policies/grading.htm.

**Purpose**

The purpose of the Graduate Grading and Evaluation Practices Policy is to ensure:

1. that grading practices in the School of Graduate Studies are consistent with those throughout the University and reflect appropriate academic standards;
2. that the evaluation of student performance is made in a fair and objective manner against these academic standards;
3. that grade scales in the School of Graduate Studies are compatible with those in other divisions of the University.

**Application of Policy**

The Policy applies to all individuals and committees taking part in the evaluation of student performance in courses in the School of Graduate Studies.
Amendment to Policy
Amendments to the Policy shall be recommended by the School of Graduate Studies Council through the Committee on Academic Policy and Programs to the Academic Board.

Distribution of Policy
A copy of the Graduate Grading and Evaluation Practices Policy shall be published in the SGS Calendar. A copy of the Calendar or other document containing the policy shall be given to all students upon initial registration and to all instructors and others involved in the evaluation of student performance. The Policy is in three parts: Part I deals with grades, Part II outlines grading procedures, and Part III is the administrative appendix from the University Grading Practices Policy for undergraduate divisions, available upon request from the Graduate Student Services Office.

Part I: Grades

Meaning of Grades
Grades are a measure of the performance of a student in individual courses. Each student shall be judged on the basis of how well he or she has command of the course materials.

I.1 A grade assigned in a course is not an assessment of standing within a program of studies. To determine the requirements for credit and standing in a program of studies, the academic regulations of the School of Graduate Studies and the appropriate graduate department, centre or institute should be consulted.

I.2 Grades for each course shall be assigned with reference to the following meanings:

Excellent
Good
Adequate
Inadequate

Grade Scales
I.3 Courses taken for graduate credit are assigned a letter grade according to the School of Graduate Studies usage as follows:

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Grade Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>Excellent</td>
</tr>
<tr>
<td>A</td>
<td>Good</td>
</tr>
<tr>
<td>A-</td>
<td>Adequate</td>
</tr>
<tr>
<td>B+</td>
<td>Good</td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
</tr>
<tr>
<td>B-</td>
<td>Good</td>
</tr>
<tr>
<td>FZ</td>
<td>Inadequate</td>
</tr>
</tbody>
</table>

Wherever an undergraduate course taken by a graduate student is assigned a numerical grade, the mark will be translated into a letter grade according to the following equivalencies:

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Grade Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>90-100%</td>
</tr>
<tr>
<td>A</td>
<td>85-89%</td>
</tr>
<tr>
<td>A-</td>
<td>80-84%</td>
</tr>
<tr>
<td>B+</td>
<td>77-79%</td>
</tr>
<tr>
<td>B</td>
<td>73-76%</td>
</tr>
<tr>
<td>B-</td>
<td>70-72%</td>
</tr>
<tr>
<td>FZ</td>
<td>0-69%</td>
</tr>
</tbody>
</table>

Credit/No Credit Courses
A special category of graduate courses designated in graduate unit listings will be graded Credit (CR) or No Credit (NCR). Such courses are to be offered at the option of the graduate unit and must have the approval of the executive committee of the appropriate Division. CR and NCR evaluations are assigned for courses in which only very broad distinctions in assessing the quality of student performance are judged appropriate.

Non-Grade Course Reports
The following non-grade course reports may appear on transcripts:

INC Incomplete: Assigned as a final report by a graduate unit review committee or SGS Vice-Dean on the basis of incomplete course work in special circumstances (e.g., medical reasons or when there are no grounds for assigning a failing grade). INC carries no credit for the course and is not considered for averaging purposes.

IPR In Progress: Assigned by the instructor as the report for a course which is continued in a subsequent session or program. The final grade for the course will appear only once and only for the last enrolment period. IPR carries no credit for the course and is not considered for averaging purposes.

NGA No Grade Available: Assigned by the division in the extraordinary case that a grade is not available for one of its students enrolled in a course. It must be replaced by a regular grade assigned by the instructor or by another symbol assigned during the divisional review. It carries no credit for the course and is not considered for averaging purposes.
Graduate Grading and Evaluation Practices Policy

Withdrawal without academic penalty:
Standing Deferred: Assigned by a graduate unit review committee to a student who has been granted an extension for the completion of course work beyond the SGS deadline for completion of course work, pending receipt from the instructor of a final course report. A final course report is due no later than the SGS deadline for completion of course work and grade submission following the original one for the course. If, by that date, a final grade is not available and the student has not submitted the outstanding course work, then the report of ‘SDF’ will be replaced by a final report of ‘INC’. SDF carries no credit for the course and is not considered for averaging purposes.

Program Transfer: Assigned by the School of Graduate Studies to a continuing research/seminar course begun but not completed in the first program and not required in the new program to which the student has been officially transferred.

Withdrawal without academic penalty:
Assigned by the graduate unit review committee, when there are extenuating circumstances, upon approval of the student’s request for late withdrawal from a course. It carries no credit for the course and is not considered for averaging purposes.

All grade revisions must be submitted to the School according to the SGS revised grade procedures.

A table of correspondence and a translation table are defined in the appendix for each letter grade scale included in the University Grading Practices Policy in order to allow the conversion, when necessary, of a grade assigned from one scale to the corresponding grade in the other.

Grade Reporting
All letter grades assigned to graduate students enrolled in School of Graduate Studies courses shall be from the same scale, but, where approved, the CR/NCR scale may also be used. The grades assigned in a course must all be from the same scale except that non-SGS students in graduate courses will be assigned grades from the refined letter grade scale or the numerical scale of marks as found in Part III.

Grades in each course shall be reported according to the practice of the division administering the program in which the student is registered (the reporting division).

a) Grades shall be reported as assigned when the division offering the course is also the reporting division, when the offering and reporting divisions use the same grade scale, and when the grades are assigned from the H/P/FL or CR/NCR scales.
b) In all other cases, grades shall be reported as converted to the scale used by the reporting division, and the conversion shall be made according to the tables of correspondence and translation tables defined in the appendix.

A list of the currently approved non-grade symbols and their meanings from the University Grading Practices Policy is given in the appendix. Those used by the School of Graduate Studies appear above and have in some cases been modified for graduate courses.

The information in grade reports and transcripts must be communicated to the user, whether within or outside the University, in a clear and meaningful way. To that end, transcripts issued by the School of Graduate Studies must indicate the relationships between the graduate grade scale, the grade meanings, the basic letter grade scale and the scale of numerical marks as well as the translation table. A list of non-grade symbols and meanings shall also be included in the transcript.

Part II: Grading Procedures

Course Procedures
To ensure that the method of evaluation in every course reflects appropriate academic standards and fairness to students, the School has adopted these regulations governing course procedures.

a) As early as possible in each course (and no later than the School’s last date for course enrolment), the instructor shall make available to the class, and shall file with the department, centre or institute, the method(s) by which student performance shall be evaluated.

This information should describe the method(s) (essays, tests, examinations, seminar presentations, etc.), the relative weight of these method(s) in relation to the overall grade, and the timing of each major evaluation. Any penalties for late completion of, and for failure to complete work, should be announced at the time the instructor makes available to the class the method(s) by which student performance shall be evaluated.

b) After the method(s) of evaluation have been made known, the instructor may not change them or their relative weight without the consent of at least a simple majority of the students enrolled in the course. Any changes shall be reported to the department, centre, or institute.

c) The relative value of each part of an examination shall be indicated to the student at the time of the examination. In the case of a written examination, the value of each part shall be indicated on the examination paper.

d) Commentary, appropriate in the instructor’s judgement, on assessed work, other than final examinations, and time for discussion of it shall be made available to students. Commentary, appropriate in the instructor’s judgement, on final examinations and time for discussion of it shall be made available to students. Commentary, appropriate in the instructor’s judgement, on final examinations and time for discussion of it shall be made available to students.

e) Grades shall be recommended by the instructor in reference to the approved grade scales on the basis of each student’s performance.
Examinations
II.2
a) Students should be provided with clear information about the expectations of the examiners, including the types of anticipated questions.
b) Students should have the opportunity to review their answers in written examinations within four months of the reporting of the grades. A recovery fee may be set to cover administrative costs, including photocopying.
c) The School has developed a procedural guide for the re-reading, by an external reviewer, of examinations written for courses by graduate students. It is to be used only when departmental appeal mechanisms have been exhausted. Costs of preparing materials for the external reader are shared between the graduate unit and the student.

Other Departmental Assessments
II.3
Departments, centres, or institutes may expect graduate students to complete requirements for a degree other than course work, such as departmental examinations, language examinations, field work or internships. Graduate students should be given a written statement describing the evaluation processes. It is appropriate that departmental evaluations of performance in these settings should accord with the principles enunciated in the other sections of this Graduate Grading and Evaluation Practices Policy, and that the effect upon deadlines of disruptions to academic programs, as described below, be taken into account. Students should also be informed of procedures for appeal.

Grade Review and Approval Process
II.4
a) Grades shall be recommended by the instructor to the chair or director, or designate, of the graduate department, centre or institute. The grades shall then be reviewed and approved following the graduate unit's procedure. Grades shall not be reported or released to students as official until this review procedure has been carried out. Normally, the graduate unit's review and approval by the chair or director constitutes final approval of grades, under the authority of the Dean of the School. Grades may be changed on appeal by the student, following the procedures of the School. Decisions regarding these matters will be made by the chair of the department.
b) The distribution of grades in any course shall not be predetermined by any system of quotas that specifies the number or percentage of grades allowable at any grade level.
c) The graduate unit's review of grades may result in the request for clarification of the evaluation methods used, or of apparent anomalies in the list of grades in a course. In the case of anomalies, the chair or director, or designate, must discuss the grade(s) with the instructor; no grade should be changed without such discussion. In the event the matter is not settled to the mutual satisfaction of the chair or director, or designate, and the instructor, the matter shall be referred to the Vice-Dean of SGS. If it is not settled at that level it should be referred to the Dean of the School whose authority for the assigning and reporting of grades is final (subject only to the formal appeals procedures of the School).
d) At any time, the School may request an explanation of any grades for a course that appear not to be based on the approved grade scales or otherwise appear anomalous in reference to this Policy.

Exceptional Circumstances and Academic Appeals
II.5
a) Students with health problems or other personal circumstances which may adversely affect their performance in, or their ability to complete course work, examinations or other departmental assessments may request special consideration. Requests, supported by a medical certificate, or other appropriate evidence, should be submitted to the instructor or the coordinator of graduate studies as soon as possible or within 48 hours of the deadline or date of assessment. The medical certificate must confirm the student was adversely affected by the health problems and must show the dates of illness and that the physician was consulted at the time of the illness.
b) Students may on occasion dispute substantive or procedural academic matters, including grades. The recommended route for the resolution of such disputes is to discuss the matter first with the instructor or the person whose ruling is in question. If the dispute persists, the student may wish to pursue a formal academic appeal – see Academic Appeals in the General Regulations section of this Calendar.

Conflict of Interest
II.6 When the instructor or a student has a conflict of interest, or is in a situation where a fair and objective assessment may not be possible, this should be disclosed to the chair or director, or designate, who shall take steps to ensure fairness and objectivity.

Procedures in the Event of Disruption
II.7
a) In the event of disruption of the graduate academic program, the following principles shall apply:
i. the academic integrity of academic programs must be honoured; and
ii. students must be treated in a fair manner, recognizing their freedom of choice to attend class, and to use academic facilities, or not, without penalty. Decisions regarding these matters will be made by the chair of the department.
b) The Vice-President and Provost, or the Academic Board, shall declare when a disruption of the graduate academic program has occurred. The Provost shall take steps to inform the University community at large of the changes to be implemented, and will report to the Committee on Academic Policy and Programs regarding the implementation of the procedures and changes to the status of the academic programs.
c) Instructors responsible for courses that are disrupted shall determine, as the disruption proceeds, whether...
any changes to classroom procedures are needed to complete the course.

d) Changes in classroom procedures should, where possible, first be discussed with students prior to the class meeting in which a vote to be taken by the students present on the proposed changes. Changes agreed upon unanimously should be forwarded to the chair or director, or designate, with a report on the attendance at the class.

If unanimity on changes has not been arrived at, or where a vote is not feasible, the instructor, after the class discussion, will provide the chair or director, or designate, with his or her recommendation, along with the results of any classroom votes. The chair or director, or designate, shall then make a decision.

e) If classes are not able to convene, the instructor, with the prior approval of the chair or director, or designate, shall make changes deemed necessary to the classroom procedures.

f) In the absence of the instructor such changes will be made by the Dean in consultation with the chair or director, or designate, and with the approval of the Provost.

g) If courses are to be cancelled, approval of the SGS Council is required. If Council cannot meet, the approval of the Dean, or in the absence of the Dean, the approval of the Provost, is required.

h) Students must be informed of changes to classroom procedures. This may be done by circulating the changes in writing to the class, posting in the office of the graduate unit, reporting to SGS Council, as well as listing in the campus press. When classes resume, students must be informed, at class, of any changes made during the disruption.

i) If changes to the classroom procedures are made, students who do not wish to complete the course under the revised procedures may withdraw without academic penalty. This must be done prior to the last day of classes.

j) If students have not attended classes that are meeting, they nonetheless remain responsible for the course work and for fulfilling course requirements. However, where possible, reasonable extension of deadlines for course requirements, or provision for make-up tests, shall be made. Reasonable alternative access to material covered should be provided.

k) A student who feels, owing to his or her special circumstances, that changes to classroom procedures have unreasonably affected his or her grade may appeal the grade following procedures for appeal set out above.

Part III: Administrative Appendix

Available at www.governingcouncil.utoronto.ca/policies/grading.htm.

Graduation and Submission of Thesis

It is the intention of the University of Toronto that there be no restriction on the distribution and publication of theses. However, in exceptional circumstances postponement of distribution and publication may be granted. For procedures see end of section under Doctor of Philosophy, Final Oral Examination.

Doctoral Thesis

Prior to the final oral examination, required copies of the doctoral thesis must be submitted by the candidate to the graduate unit. The candidate should consult the graduate coordinator regarding requirements and deadlines for submission of material.

The graduate unit is responsible for ensuring that one copy of the thesis is brought to the final oral examination. Following successful completion of the final oral examination, at least one bound copy of the doctoral thesis in final form must be submitted by the candidate to the graduate unit. Candidates should consult their unit to determine the format, number, and distribution of copies. One copy must be submitted to the School, either in unbound paper format or electronically through T-space. These copies must be submitted before candidates can be recommended for the award of the degree. Otherwise, the awarding of the degree will be delayed. The “Authority to Distribute” form must be bound inside the front cover of the bound copy. A second “Authority to Distribute” form, the “Library and Archives Canada Theses Non-exclusive License” form, and the ProQuest Information and Learning “Subject Category” form, as well as any copyright permissions, must be submitted with the unbound paper copy, if this method of submission is chosen. If the thesis is submitted electronically, the School must receive an original signed copy of the “Library and Archives Canada Theses Non-exclusive Licence” form, as well as any copyright permission letters. Until September 2009, all theses will be microfilmed regardless of the submission method. The unbound copy will be returned to the University Library after a microfiche copy has been made by ProQuest. The Library will arrange for the binding of these copies which will be deposited in the University Library. Electronic submissions will be stored with the Library and with T-space at the University of Toronto. Candidates will be charged $20.00 for the binding of the thesis. All theses copies must have an abstract included. Theses that do not conform to the guidelines for preparation of the unbound copy for microfilming, for preparation of the abstract and thesis for reproduction in Dissertation Abstracts International, and for binding will not be accepted by the School or by ProQuest. For more information about binding, visit the Current Students’ section of the SGS Web site www.sgs.utoronto.ca for “Guidelines for the Preparation of Theses”.

Further details about doctoral theses may be found in the Degree Regulations section of this Calendar under Doctor of Philosophy, Final Oral Examination.

Master’s Thesis

After completing the thesis defence, the original thesis must be submitted to the School, either in paper format or electronically. If submitting a paper copy, the School should receive an unbound copy, along with an abstract of no more than 150 words, the signed
Convocation ceremonies are held twice a year, in the spring and fall. Students may attend the ceremony which directly follows the completion of their degree requirements. The Director of Convocation which is responsible for the procedures.

Graduation information is available on the University of Toronto Web site at www.utoronto.ca/convocation.

**Intellectual Property**

Intellectual property created at the University of Toronto is governed by its Inventions Policy and its Copyright Policy:

- www.utoronto.ca/govcncl/pap/policies/invent.html
- www.utoronto.ca/govcncl/pap/policies/copyright.html

Works subject to the Canada Copyright Act are owned by their authors unless undertaken in the course of University employment or by specific commission.

Inventions are initially owned jointly by the inventors and the University. Except where otherwise determined by a separate third-party agreement, the University’s Inventions Policy allows inventors to assume full ownership of their intellectual property. Faculty members have an obligation to inform students if they are involved in research funded under agreements that grant intellectual property rights to a sponsor. The University also has an obligation to inform students in advance if the student’s course work is related to the business of a company in which the faculty member has a financial interest.

Prior to commercialization, all intellectual property, including software, must be disclosed to the University of Toronto Research Services (UTRS). If the inventor(s) choose to assume full ownership, the University will assign its ownership interest to them in return for certain undertakings, including remitting to the University 25% of any proceeds from commercialization.

Among the commercialization options available to inventors is the expertise of Innovations at U of T (IUT). IUT combines the University’s internal technology transfer operation with its former commercialization agency, the Innovations Foundation. IUT connects researchers with businesses and also facilitates licenses and patents.

Researchers are advised that public disclosure of any kind (written, verbal, or electronic) of intellectual property prior to the filing of a patent application may severely damage its commercial value. However, confidential disclosure to the University does not constitute a public disclosure.

Copies of the Inventions Policy, the Copyright Policy, the Confidential Disclosure Forms, and the SGS Guidelines on Intellectual Property for Graduate Students and Supervisors are available from IUT, UTRS, and SGS or can be printed conveniently from the Web sites listed above.
General Regulations

Research Ethics

The University Policy on Ethical Conduct in Research requires each academic division to formulate its own guidelines. The divisional guidelines apply to graduate students enrolled in graduate units within those faculties. See also SGS Student Guide on Ethical Conduct of Research Involving Human Subjects on the SGS Web site.

Policy on Academic Sanctions for Students who have Outstanding Obligations to the University

Academic sanctions are applicable to any student who has an outstanding obligation to the University. Recognized obligations are as follows:
1. tuition fees
2. academic and other incidental fees
3. residence fees and other residence charges
4. library fines
5. bookstore accounts
6. loans made by colleges, faculties or the University
7. health service accounts
8. unreturned or damaged instruments, materials and equipment
9. orders for the restitution, rectification, or the payment of damages, fines, bonds for good behaviour, and requirement of public service work imposed under the authority of the Code of Student Conduct.

The following academic sanctions will be imposed on students who have outstanding recognized financial obligations to the University.
1. Statements of results or official transcripts of record, or both will not be issued.
2. The University will not release the official document (called the diploma) which declares the degree earned, nor provide oral confirmation or written certification of degree status to external enquirers. Indebted graduands will be allowed to walk on stage and have their names appear on the convocation program.
3. Registration will be refused to a continuing or returning student. Payments made by continuing or returning students shall be applied first to outstanding University debts, and second, to current fees.
For a complete online text of this policy, please see the Governing Council Web site www.governingcouncil.utoronto.ca/policies/sanction.htm.

Code of Behaviour on Academic Matters

The Governing Council of the University of Toronto has approved a Code of Behaviour on Academic Matters applying to members of the University. The Code of Behaviour on Academic Matters addresses the responsibilities of all parties to the integrity of the teaching and learning experience. It concerns the accountability of faculty members and students as they cooperate in all phases of this relationship. Honesty and fairness must inform these activities, the foundation of which is mutual respect for the aims of education and for those ethical principles which characterize the pursuit and transmission of knowledge within the University.

The Code addresses offences, procedures, sanctions: more information appears in three appendices. The Code is enforced by Divisional Deans, the Provost, and the University Disciplinary Tribunal.

In cases involving graduate students, the divisional dean is the Dean of the School of Graduate Studies.
The full text of the Code of Behaviour on Academic Matters is available on the University of Toronto Web site at www.governingcouncil.utoronto.ca/policies/behaveac.htm.

Policy and Procedures: Sexual Harassment

Harassment in any situation is reprehensible. In particular, within the University community it fosters a hostile or unfair environment which counteracts the spirit of cooperation and education. To guard against sexual harassment, the Governing Council of the University of Toronto has approved a Policy and Procedures: Sexual Harassment, which protects students, faculty, and staff from sexual harassment within the University community. All complaints will be guided by a spirit of fairness to each party and insures a fair and impartial hearing. Under the policy, complainants have the right to seek a remedy and respondents have the right to know both the allegations and the accuser. The highest standards of confidentiality are maintained in order to protect any party against unsubstantiated claims which might result in harm or malicious gossip. The full text of the policy and procedures is available at www.governingcouncil.utoronto.ca/policies/sexual.htm.

Code of Student Conduct

Students have an obligation to make legal and responsible decisions concerning their conduct. The University has no general responsibility for the moral and social behaviour of its students. In the exercise of its disciplinary authority and responsibility, the University recognizes that students as free to organize their own
personal lives, behaviour and associations subject only to the law and to University regulations that are necessary to protect the integrity and safety of University activities, the peaceful and safe enjoyment of University housing by residents and neighbours, or the freedom of members of the University to participate reasonably in the programs of the University and in activities in or on the University’s premises.

Non-academic offences are defined in the University’s Code of Student Conduct. The Code addresses offences, procedures, interim conditions and measures, and sanctions. The full text of the Code of Student Conduct is available on the University of Toronto Web site at www.governingcouncil.utoronto.ca/policies/studentc.htm

Policy on Access to Student Academic Records

Academic records of students are ultimately the property of the University; it is the responsibility of the University to establish overall University policy in this area. The Policy on Access to Student Academic Records establishes university-wide aims, objectives, criteria and procedures which apply to the academic records of students.

The Policy ensures that students, alumni and former students are allowed as great a degree of access to their own academic records as is academically justifiable and administratively feasible. A student’s right to privacy in relation to his or her academic records is safeguarded as far as both internal university access and external public access are concerned. The Policy calls for basic university-wide consistency in the kinds of information collected, recorded, filed and made available.

The complete Policy on Access to Student Academic Records is available on the University of Toronto Web site www.governingcouncil.utoronto.ca/policies/sturec.htm.

Policy on Official Correspondence with Students

The University and its divisions may use the postal mail system and/or electronic message services (e.g., electronic mail and other computer-based online correspondence systems) as mechanisms for delivering official correspondence to students.

Official correspondence may include, but is not limited to, matters related to students’ participation in their academic programs, important information concerning University and program scheduling, fees information, and other matters concerning the administration and governance of the University.

Postal Addresses and Electronic Mail Accounts

Students are responsible for maintaining and advising the University, on the University’s student information system (currently ROSI), of a current and valid postal address as well as the address for a University-issued electronic mail account that meets a standard of service set by the Vice-President and Provost.

Failure to do so may result in a student missing important information and will not be considered an acceptable rationale for failing to receive official correspondence from the University.

University Rights and Responsibilities Regarding Official Correspondence

The University provides centrally-supported technical services and the infrastructure to make electronic mail and/or online communications systems available to students. University correspondence delivered by electronic mail is subject to the same public information, privacy and records retention requirements and policies as are other university correspondence and student records. The University’s expectations concerning use of information and communication technology are articulated in the guidelines on Appropriate Use of Information and Communication Technology (available on the web site of the Office of the Vice-President and Provost: www.provost.utoronto.ca/policy/use.htm.)

Students’ Rights and Responsibilities Regarding Retrieval of Official Correspondence

Students are expected to monitor and retrieve their mail, including electronic messaging account(s) issued to them by the University, on a frequent and consistent basis. Students have the responsibility to recognize that certain communications may be time-critical. Students have the right to forward their University-issued electronic mail account to another electronic mail service provider address but remain responsible for ensuring that all University electronic message communication sent to the official University-issued account is received and read. To read an online version of this policy, visit http://www.governingcouncil.utoronto.ca/policies/studentemail.htm.

Safety in Field Research

The University of Toronto Policy for Safety in Field Research states that working responsibility for safety in field research rests primarily upon the persons who directly supervise and carry out the research on location. Such persons are expected at all times to use good common sense. The University’s concern in this policy is to require that due diligence be exercised by all concerned parties in giving attention to the nature of, and the means for dealing with, the categories of risk that may be associated with each location and kind of field research. It is the
intention of the University that participants enter into field research on the basis of their informed understanding of the associated risks and their consent to the means for dealing with such risks.

Students engaged in field research beyond the University’s geographical boundaries should be familiar with the section of the policy which sets out the Requirements for Personal Care, and Responsibilities and Procedures. The full policy is available on the University of Toronto Web site at www.utoronto.ca/govc-nl/pap/policies/safefr.html.

Students are also encouraged to review the Guidelines for Safety in Field Research produced by the Office of Environmental Health and Safety at www.utoronto.ca/safety/Policies/fieldres.htm.

**Statement on Appropriate Use of Information and Communication Technology**

The University of Toronto provides guidelines on the appropriate use of information and communication technology (ICT) within the University community. ICT resources are made available for all employees, students, and other members of the university community but remain the property of the University. Users are expected to limit their use to the performance of University-related activities, although a reasonable allowance will be made for personal use. Users should not have an expectation of complete privacy in using the University’s ICT and related services. The full text of the guidelines is posted on the Provost’s Web site at www.provost.utoronto.ca/policy/use.htm.

**Statement on Human Rights**

Acknowledging its fundamental and distinctive commitment to freedom of thought, inquiry, and expression, the University of Toronto affirms its commitment to the values of equal opportunity, equity and social justice. In this affirmation, the university

1. acknowledges that it conducts its teaching, research and other activities in the context of a richly diverse society;
2. recognizes that the attainment of excellence in pursuit of its mission is furthered by the contribution made by persons reflecting this rich diversity;
3. acts within its purview to prevent or remedy discrimination or harassment on the basis of race, gender, sexual orientation, age, disability, ancestry, place of origin, colour, ethnic origin, citizenship, creed, marital status, family status, receipt of public assistance or record of offence;
4. acts conscientiously in keeping with its own policies and existing legislation related to human rights, such as its Code of Behaviour on Academic Matters, its Policies and Procedures: Sexual Harassment, its Employment Equity Policy and the Human Rights Code of the Province of Ontario.
Introduction

Graduate Student Supervision

While the special, collaborative relationship between student and supervisor serves as a foundation for graduate education, particularly at the PhD level, the primary responsibility for graduate programs and their supervision rests with the graduate unit. The Chair of the graduate unit has the principal obligation and authority for exercising these responsibilities, in accordance with the Statute of the School of Graduate Studies, and therefore, for implementing the academic and procedural standards established in the School in 1985/86 in the form of the “Report of the Committee on PhD Supervision” (Endrenyi Report).

Although the report indicates procedures to be followed in the supervision of PhD students, it is clear that these have general applicability for all graduate students to some degree. It is essential that students have access to information relevant to their graduate program of studies, in all domains. Thus each graduate unit will provide students with a document which provides details of all procedures involved with graduate training, a list of members of the graduate faculty with relevant information concerning their participation, fields of expertise and supervision, and a copy of Graduate Supervision: Guidelines for Students, Faculty, and Administrators (also available online at www.sgs.utoronto.ca/current/supervision/guidelines.pdf). In addition, updated statements must be made available to students on a regular basis. These will include a list of graduate students (with their general thesis topic, supervisor(s) and advisor(s)), the availability of financial assistance, and relevant information to affected students about the expected absences of their supervisor(s) and/or advisor(s). Any doctoral student who believes that his or her graduate unit is not following the supervision guidelines may inform his or her Coordinator of Graduate Studies or the Vice-Dean of the School of Graduate Studies.

The academic experience is greatly enhanced if members of the academic faculty, in addition to the direct supervisor, are readily and formally available for consultation and discussion with the graduate student. Therefore, an individual thesis supervisory committee or, as an alternative, an area supervisory committee, should be struck as early as possible for each graduate student, and certainly from the commencement of thesis supervision.

The graduate unit is responsible for adopting a procedure for monitoring the progress of PhD students registered in its programs. The procedure shall contain the following minimum elements, consistent with Graduate Supervision: Guidelines for Students, Faculty, and Administrators, available at graduate units and online at www.sgs.utoronto.ca/current/supervision/guidelines.pdf:

1. A supervisory committee consisting of the supervisor and at least two graduate faculty members.
2. The supervisory committee meets with the student at least once per year to assess the student’s progress in the program and to provide advice on future work.
3. The committee submits a report detailing its observations of the student’s progress and its recommendations.
4. The student must be given the opportunity to respond to the committee’s report/recommendations and to append a response to the committee’s report.
5. Copies of the report shall be given to the student and filed with the department.

**Thesis Topic and Supervision**

In those degree programs for which a thesis is part of the requirements, the work upon which the thesis is based must be conducted under the direction of one or more members of the faculty of the School of Graduate Studies.

A student must choose a thesis topic for which the graduate unit in which he or she is registered is able to provide adequate supervision.

A student’s choice of thesis topic, as well as his or her choice of supervisor and supervisory committee, is subject to the approval of the graduate unit in which the student is registered.

**Transfer Credit and Exemptions**

Transfer credit for graduate work completed in another program is limited to one full course or equivalent, or 25 percent of the course requirements for any degree, whichever is greater, provided that the courses have not been credited towards another degree, diploma, certificate, or any other qualifications. Such credit may be given on the recommendation of the student’s graduate unit and with the School’s approval, normally upon admission. Exceptions to the limit are allowed when approved for specific degrees.

Students participating in an approved exchange program on the recommendation of their graduate unit may receive transfer credit for up to 50 percent of the course requirements for their degree. They may also complete language requirements while on the exchange. When recommended by the unit and approved by the SGS Dean, that percentage may be exceeded by doctoral students. In all cases transfer credit arrangements for exchange program participants must be approved in advance by the SGS Dean or designate.

Transfer of credit and course exemptions include the following categories:

1. **Transfer Credit - Course Equivalent:** Credit received for course completed in a prior program is considered to be equivalent to course offered by the graduate unit thus reducing the overall course credit requirements for degree.
2. **Transfer Credit - General Equivalent:** Unassigned credit for course not identifiable with course offerings but which is evaluated as being appropriate for academic credit on transfer thus reducing overall course credit requirements for degree.
3. **Course Exemption:** The graduate unit may exempt a student from a specific course requirement permitting the substitution of another course to meet degree requirements. Overall course credit requirements for degree are not reduced.

**Advanced Standing**

Advanced standing refers to academic credit awarded upon admission to a program of study which enables direct entry to an identified higher academic achievement level of the program. Students are eligible for advanced standing if they meet a clearly articulated set of objectives and/or course requirements for an advanced standing option as defined in the graduate program calendar entry. Not every program will offer an advanced standing option. Consult the graduate unit regarding advanced standing options.

**Doctor of Philosophy**

For specific admission and program requirements, please consult graduate unit entries. The Council of the School of Graduate Studies has recommended that all graduate units offering the PhD design a four-year program that can be completed on a full-time basis by a student who has a master’s degree in a discipline appropriate to the intended field of study. Where graduate units are aware that it may be difficult for students to complete their PhD programs within four years, they have been asked to include a statement to that effect in their calendar entries.

**Admission Requirements**

1. **Four-Year PhD Program**

   Students admitted to this program require a University of Toronto master’s degree or equivalent with at least B+ standing from a recognized university in a discipline deemed appropriate to the intended field of study.

2. **Five-Year PhD Program**

   Students admitted to this program require a four-year University of Toronto bachelor’s degree or its equivalent with at least A- standing from a recognized university in courses in the relevant discipline. Students who hold a master’s degree in another discipline or require further preparation would also normally be admitted to this program.

**Registration**

1. A Doctor of Philosophy student must be regularly registered in the School of Graduate Studies in accordance with the procedures of the General Regulations. PhD students must register for every successive session, including summers, on a full-time basis following their first session of registration unless granted a leave of absence. The minimum period of registration is one academic year, that is, three consecutive sessions.

2. A student who is admitted on condition that the requirements for an acceptable master’s degree at another university be completed may be permitted conditional registration, unless this is excluded by the terms of the letter of admission. A student who is conditionally registered must submit to the graduate unit, not later than January 31 of the first year of enrolment, official verification of completion of the requirements for the master’s
degree. If verification is not submitted by that date, additional requirements may be added to the PhD program.

Transfers
1. Master’s to PhD
A student may be recommended for transfer from a master’s program to a PhD program. In such cases, the student will transfer to a five-year PhD with the years in the master’s program being counted as part of the PhD program. The total number of courses required for the PhD is the sum of the normal master’s and PhD course requirements unless otherwise specified by the graduate unit.

2. PhD to Master’s
Students transferring from the PhD to the master’s program must complete all of the normal master’s degree requirements, or their equivalent, in order to be awarded the master’s degree. These transfers are made on the recommendation of the graduate unit and must be approved by the Vice-Dean. A second University of Toronto master’s degree of the same name will not be conferred unless it is undertaken in a different field of study from the first. Students who transfer from the PhD to the master’s program will not be permitted to register subsequently in the PhD program within the same graduate unit unless approved by the SGS Admissions and Programs Committee.

Program Requirements
1. Approval
A student shall pursue a program of advanced study and research which must be approved by the graduate unit.

2. Program
Specific program requirements are set by the graduate units and are found in their respective entries. The thesis topic and the name of the supervisor must be submitted by the middle of the first session of the second year. Graduate units may, at their discretion, require an earlier date.

3. Language Requirement
The student must have an adequate knowledge of such language or languages, other than English, as are required by the major graduate unit (see individual graduate unit entries for specific requirements). Testing and certification of languages (including French and German) may be administered by the appropriate language department or by the student's own graduate unit. The major graduate unit is responsible for ensuring that an acceptable certificate of language competence is deposited in the official student file.

4. Time Limit for Completion of Program Requirements
A student enrolled in a full-time (as opposed to a flexible-time) PhD degree program will be denied further registration in that program and will have his or her eligibility terminated at the end of the third year of registration, in the case of a four-year program, or at the end of the fourth year of registration, in the case of a five-year program, if by that time either
a) the student has not completed all requirements for the degree exclusive of thesis research—including course requirements, language requirements, qualifying departmental examinations—or
b) the student does not have an approved thesis topic, supervisor, or supervisory committee.

Note: The foregoing time limit does not apply to courses that run continuously throughout the program, e.g., ongoing research seminar courses.

In exceptional circumstances, a student who has not met these requirements may be permitted to register in the program for two further sessions at the discretion of the graduate unit concerned. Continuation beyond two sessions will require the approval of both the graduate unit and the SGS Admissions and Programs Committee.

Completion of the program requirements identified above will signal the achievement of candidacy.

5. Thesis
The candidate, through the graduate unit, shall present a thesis embodying the results of original investigation, conducted by the candidate, on the approved topic from the major field. The thesis shall constitute a significant contribution to the knowledge of the field and must be based on research conducted while registered for the PhD program.

A thesis should have a coherent topic with an introduction presenting the general theme of the research and a conclusion summarizing and integrating the major findings. Nonetheless, it may contain a collection of several papers. The collection of papers may be expanded or supplemented by unpublished material, scholarly notes, and necessary appendices. In all theses, pagination should be continuous; there should be a common table of contents and an integrated bibliography for the whole thesis. A thesis must be prepared in a standard format (see National Library guidelines and Guidelines for the Preparation of Theses referred below).

The thesis should normally be written in English, but with the permission of the School, a graduate unit may permit, or require, students in that unit to write the thesis in French.

In Division I, the humanities, permission may be given for a thesis to be written in a language other than English or French when the language has been approved for use in theses by the graduate unit concerned. Before such permission can be granted, the graduate unit chair must certify in writing to the School that the candidate has passed a supervised essay-type examination, written in English, that demonstrates his or her proficiency in writing correct and idiomatic English prose. A supplementary abstract of about 5,000 words in English or French must form part of a thesis that is written in a language other than English or French, and no language other than English or French may be used for the conduct of final doctoral examinations.

6. Time for Completion of Degree
All requirements must be completed within six years from first enrolment for the four-year PhD program and within seven years for the five-year PhD program.

Doctor of Philosophy
In exceptional circumstances, a candidate who has failed to complete all the requirements for the degree within this period may be considered for a maximum of two one-year extensions provided that the graduate unit concerned approves. To qualify for an extension, the candidate must present to the graduate unit concerned the causes for the delay and evidence of substantial progress on the thesis. A candidate who is granted an extension must register as a full-time student. Any extension granted must be calculated as beginning immediately upon the termination of the permitted periods.

PhD students who have not completed the degree before the time limit for the degree or by the end of the extension period may not enrol further but, after an interval, may apply to be re-instated once only as a candidate for the purpose of presenting a thesis and defending it at a final oral examination. The reinstatement must have the approval of both the graduate unit and SGS. It will be for a maximum of 12 months starting September, January, or May. Reinstatement is normally not approved until the defence has been scheduled. The final oral examination must be held within the 12-month reinstatement period. A student reinstated after the degree time limit will pay a reinstatement fee equivalent to a one session full-time fee (Fall or Winter). No fees will be charged for the sessions after the normal time limit for the degree during which the student was not registered. In the case of a reconvened examination for a student reinstated after the normal time limit for the degree, no fees would be charged, but the student must remain registered.

**Flexible-time PhD Degree**

Departments may develop, for approval, PhD programs which may be completed on a “flexible-time” basis. Such programs will be offered where there is sufficient demand by practicing professionals for design and delivery of PhD programs that, except for short specified periods of time, permit continued employment in areas related to the fields of research. In these programs, theory and praxis would uniquely engage and inform each other.

The flexible-time PhD differs from the full-time PhD only in design and delivery. Students in a flexible-time program will normally register full-time during the first four years and part-time during subsequent years of the program. Students are required to be registered for every successive session, including summers, following their first session of registration unless granted a leave of absence.

The time limit, between six to eight years, will be specified by the departmental regulations. Extensions are permitted under existing policy; students granted an extension may register full-time or part-time.

Transfers between the full-time PhD program and the flexible-time PhD program will not be permitted.

**Final Oral Examination**

1. The candidate shall defend the thesis at a final oral examination organized by the graduate unit with the cooperation of SGS. The process of scheduling the examination, allowing time for professional appraisal, can be expected to take at least eight weeks at the best of times, and candidates should discuss the timing with the graduate administration of their unit. Candidates should also ascertain whether or not their unit imposes regulations over and above the minimal conditions required by SGS.

2. The graduate unit will notify SGS eight weeks prior to the examination when the thesis is ready to go forward for examination. In the absence of any particular local procedure, the candidate’s supervising committee will advise SGS that the thesis is ready to proceed. In rare cases, a thesis may proceed to examination without the approval of the supervising committee: candidates should contact the SGS Vice-Dean, Programs.

3. The thesis will be sent to an appraiser external to the University of Toronto, appointed by SGS on the recommendation of the graduate unit. (The Supervisor of the thesis will propose a list of three or more names of possible external appraisers to the graduate coordinator or Chair, who will choose one and send the recommendation to SGS for approval. The graduate unit will certify that the external appraiser has an arm’s-length relationship to the candidate and Supervisor.) The external appraiser should be a recognized expert on the subject of the thesis and should be external to the University as well as to its affiliated teaching hospitals and research institutes. Such an individual must be an associate or full professor at the home institution or, if the individual comes from outside the academic sector, must possess the qualifications to be appointed to an academic position at this level. Arrangements with external appraisers are the responsibility of the graduate unit. In particular, the graduate unit must allow the external appraiser sufficient time to act. The graduate unit must have a copy of the thesis delivered to the appraiser at least six weeks, and preferably longer, in advance of the examination date. Appraisals must be submitted to SGS at least two weeks in advance of the examination date; if they are not, the examination may have to be rescheduled. The graduate unit must also ensure that copies of the thesis are made available to all other voting members of the Examination Committee at least four weeks in advance of the examination date.

4. An Examination Committee, appointed by SGS on the recommendation of the graduate unit, will conduct the Final Oral Examination. The Examination Committee must include at least four, but no more than six, voting members: one to three of the voting members will have served on the candidate’s Supervisory Committee, and at least one voting member will not have been closely involved in the supervision of the thesis. Eligible for inclusion in the latter group are the external appraiser (in person or by audio connection), members of the graduate faculty of the candidate’s graduate unit, and members of the graduate faculty of other departments, centres, or institutes of the University. The Examination Committee may include, in addition, up to two non-voting members, who will be members of the graduate faculty of the candidate’s graduate unit or members of the graduate faculty of another graduate unit of the University. A quorum is
four voting members. Graduate units must ascertain in advance the willingness of the persons named to act. The SGS Vice-Dean, Programs, may modify the composition of the Examination Committee to fit exceptional circumstances.

5. SGS will appoint a non-voting Chair to the Examination Committee. The Chair will be a full member or member emeritus of the graduate faculty, holding no appointment to the graduate faculty of the candidate’s graduate unit.

6. The graduate unit is responsible for scheduling the examination, booking a room, and making appropriate technical arrangements.

7. The graduate unit must submit to SGS a Certificate of Completion together with the nomination form confirming completion of all other academic requirements, such as language and field requirements; an abstract of the thesis not longer than 350 words; and a copy of the Examination Program.

8. The graduate unit will send a copy of the external appraisal of the thesis to SGS as soon as it is received. The graduate unit is responsible for the distribution of copies of the external appraisal to the candidate (two weeks before the examination) and members of the Examination Committee. To avoid prejudicing the result of the examination, the external appraisal is not to be discussed with the candidate by members of the Examination Committee until the examination takes place, nor should it be distributed beyond that group and the relevant administrative officers.

9. Members of the graduate faculty are entitled to attend the examination, and with the permission of the Chair, they may ask questions of the candidate, but they must withdraw before the Committee’s discussion and vote. A qualified observer may attend, subject to the same restrictions, if the graduate unit has received approval for such attendance in writing beforehand from the SGS Vice-Dean, Programs. Otherwise the examination is closed to the public. The vote at the examination takes into account both the thesis and the oral defence itself.

10. The Examination Committee represents the SGS Graduate Education Council and through it the University. It is therefore responsible for the standard of the PhD degree in this University. Graduate unit examinations held immediately in advance of the final oral must not therefore interfere with attendance at, or thoroughness of, the final examination.

The Committee must evaluate the external appraisal of the thesis, which is to be considered only as an individual opinion to be employed as the committee sees fit. It must examine the candidate on the content and implications of the thesis. Where someone other than the candidate is a co-author of any portion of the thesis, the Examination Committee must be satisfied that the candidate’s personal contribution to the thesis is sufficient to fulfill the requirements of the PhD degree. In addition to determining the adequacy of the thesis, the committee must satisfy itself that the thesis document meets the proper standards of scholarship.

The committee possesses the full authority of the School with respect to the examination.

11. A quorum for the final examination is four voting members, plus the Examination Committee Chair who has no vote. Voting shall be by signed ballot, and the names of the examiners and their respective votes shall be read to the Examination Committee by the Chair. If a quorum is not present the Chair may delay the examination to obtain a quorum or may postpone the examination to another date.

12. The candidate passes on the first examination:
   a) if the decision is unanimous, OR
   b) if there is not more than one negative vote or abstention.

If there is more than one negative vote or abstention, adjournment is mandatory.

In the event of adjournment, the Examination Committee must provide the candidate, as soon as possible, with a written statement that indicates the reasons for adjournment and the committee’s requirements for the reconvened oral examination. In addition, the Examination Committee must decide the approximate date of the reconvened examination. The time between the adjourned examination and the reconvened examination should be as short as circumstances will permit and in no case shall exceed one year.

At the reconvened examination, no new committee members shall be added, except for necessary replacements. It is the obligation of the examiners to attend the reconvened examination.

The candidate passes on the reconvened examination:
   a) if the decision is unanimous, OR
   b) if there is not more than one negative vote or abstention.

No further adjournment will be allowed.

If a candidate is not recommended for the degree by the committee in charge of the second examination, the candidate is ineligible for further PhD candidacy at the University. The Examination Committee must provide the candidate, as soon as possible, with a written statement that explains clearly and directly why the examiners found the candidate’s performance unsatisfactory on the written and/or oral components of the examination, as may be relevant.

13. If minor corrections in style are a condition of acceptance of the thesis, the candidate must complete the corrections within one month of the date of the examination, and the supervisor will inform the candidate of the necessary corrections. The supervisor must notify the School of Graduate Studies directly in writing that the required corrections have been made by the candidate, with a copy of the correspondence sent to the graduate coordinator of the graduate unit, before the candidate is recommended for the degree.

14. If minor modifications are a condition of acceptance of the thesis, the Chair of the Examination Committee will appoint a Subcommittee of the Examination Committee (to be approved by the Examination Committee) to supervise the proposed modifications. One member of the Subcommittee is designated by the Chair, with the approval of the Examination Committee, as the Convenor. The Convenor will be responsible for the preparation of a
Degree Regulations

Statement detailing the modifications required. Modifications must be completed within three months of the date of the oral examination. The members of the Subcommittee will report on the acceptability of the completed modifications to the Convenor. If all members of the Subcommittee approve the completed modifications, the candidate will be passed without the necessity of reconvening the Examination Committee. The Convenor of the Subcommittee must certify in writing to the School of Graduate Studies, within three months of the original examination, that the modifications have or have not been satisfactorily completed. If one or more members of the Subcommittee do not approve the completed modifications, the final oral examination must be reconvened within a year of the date of the original examination.

The Examination Committee must decide the nature of minor modifications, but it is intended that minor modifications should be more than corrections in style and less than major changes in the thesis. A typical example of minor modifications might be clarification of textual material or qualification of research findings and conclusions. The option of acceptance with minor modifications does not apply to the reconvened examination.

If major changes are required, the examination must be adjourned and the Committee reconvened after the changes have been made.

15. The University Library authorization form and publication agreement must be signed by the candidate when the final thesis is submitted. The format of the submitted thesis must comply with the School of Graduate Studies guidelines.

16. The School requires that every PhD thesis be published substantially as it is accepted. It is the intention of the University of Toronto that there be no restriction on the distribution and publication of theses. However, in exceptional cases, the author, in consultation with the thesis supervisor and with the approval of the chair of the graduate unit, shall have the right to postpone distribution and publication for a period up to two years from the date of acceptance of the thesis. In exceptional circumstances and on written petition to the Dean of the School of Graduate Studies, the period might be extended, but in no case for more than five years from the date of acceptance of the thesis unless approved by the SGS Graduate Education Council.

For further details, students should consult the pamphlet, Guidelines for the Preparation of Theses at www.sgs.utoronto.ca/current/thesis.

Doctor of Education

The EdD program is designed to provide opportunities for more advanced study for those already engaged in a career related to education. Specific admission and program requirements are available through the graduate units.

Admission Requirements

1. A University of Toronto MEd or MA in Education, or its equivalent from a recognized university, in the same area of specialization proposed at the doctoral level, completed with standing equivalent to a University of Toronto B+ or better;
2. Ordinarily, one year of professional preparation for education;
3. Successful professional experience in education, or in a relevant field.

A student may be enrolled in one of the following graduate units:
- Adult Education and Counselling Psychology
- Curriculum, Teaching and Learning
- Human Development and Applied Psychology
- Sociology and Equity Studies in Education
- Theory and Policy Studies in Education

Program of Study

For specific program and registration requirements, consult the home graduate unit.

1. Normally, a minimum of one Fall Session and one Winter Session of full-time study must be taken consecutively (i.e., Fall Session - September to December, followed by Winter Session - January to April, or Winter Session - January to April, followed by Fall Session - September to December).
2. In most programs, students may begin their studies on a part-time basis.
3. Eight half-courses are required for students who have an MEd or MA degree or the equivalent in the same area of specialization proposed at the doctoral level. Upon the recommendation of the home department, students beginning the degree program on a full-time basis can add prerequisite courses to their program. Otherwise, students must take prerequisite courses as "Special Students" at OISE/UT.

An eight half-course EdD program should include at least four half-courses in the home department except as otherwise stated in departmental program descriptions.

4. Students in some departments or specializations will be required to take a comprehensive examination. Consult specific departments for details.
5. A thesis embodying the results of original investigation conducted by the student under the direction of an OISE/UT thesis committee. The student must file the names of thesis committee members by April 1 of the year following the period of required full-time study.

The thesis will report the results of a study, which might address theoretical issues applicable to professional concerns and practice, or which might focus directly on the exploitation of knowledge in order to study or influence aspects of educational practice.

The thesis must conform to the tenets of scholarly writing in a rigorous style of presentation. All students using human subjects in their thesis research must have their thesis proposals reviewed by the OISE/UT-wide Student Education Ethics Review Committee (SEERC) administered by University of Toronto Research Services (UTRS). Please consult the OISE/UT Guidelines for Theses and Orals regarding thesis and ethical review procedures.

6. Students undergo a final oral examination on the content and implications of the thesis, to determine the
adequacy of both the thesis and its defence by the student.
7. All requirements for the EdD must be completed within six years of first enrolment as an EdD student.

**Master of Philosophy**

The University of Toronto no longer offers programs of study leading to the degree of Master of Philosophy.

**Master of Arts and Master of Science**

**Admission Requirements**
1. Students are admitted under the general regulations.
2. If the master's program is not a continuation of a course of study previously pursued as an undergraduate, or if there are deficiencies in meeting graduate unit admission requirements, prerequisite work may be required and the minimum length of program may be extended.

**Program of Study**
1. Under the direction of one graduate unit, a student in this University shall pursue a program of advanced study approved by the graduate unit.
2. All requirements for the degree of MA or M.Sc. must be satisfactorily completed within 5 years from first enrolment if the minimum period of full-time registration is up to 12 months and within 6 years from first enrolment if the minimum period of full-time registration is 16 to 24 months.

For specific admission and program requirements, please see the appropriate graduate unit entry. In advance, prospective students should consult the Coordinator of Graduate Studies of the appropriate graduate unit to ensure that the proper undergraduate courses are being taken in preparation for the master's program.

**Master of Applied Science**

The MASc degree is intended primarily for those who wish to prepare for a career in research and/or plan to continue their graduate studies through the PhD degree.

**Admission Requirements**
1. Students are admitted under the general regulations.
2. Applicants shall hold the degree of Bachelor of Applied Science of this University or an equivalent degree in engineering. An applicant having a bachelor's degree in science or applied mathematics may be admitted as a student by the graduate unit concerned.

A student may be enrolled in one of the following graduate units:
- Aerospace Science and Engineering
- Biomaterials and Biomedical Engineering
- Chemical Engineering and Applied Chemistry
- Civil Engineering
- Electrical and Computer Engineering
- Geology
- Materials Science and Engineering
- Mechanical and Industrial Engineering

**Program of Study**
1. Under the direction of one graduate unit, a student in this University shall pursue a program of study approved by the graduate unit. The program shall be equivalent in weight to full-time study for at least two sessions (eight months), and may include a project in addition to lecture and laboratory courses.
2. There is no general residence requirement for the degree. However, a period of residence may be required, depending on the individual student's program and experience. This required period shall be as recommended by the graduate unit and approved by the School of Graduate Studies, but shall not exceed two sessions.
3. The degree program must be completed within six calendar years of registration.
Master of Health Science

The degree of Master of Health Science is offered in the following graduate units:
- Biomedical Engineering
- Health Policy, Management and Evaluation
- Medical Science
- Public Health Sciences
- Speech-Language Pathology

Since requirements for these programs differ, students should consult the individual graduate unit entry for details.

Master of Education

Admission Requirements
1. Students are admitted under the general regulations.
2. An appropriate four-year University of Toronto bachelor's degree, or its equivalent from a recognized university, completed with standing equivalent to a University of Toronto mid-B or better in the final year. Under exceptional circumstances, for applicants with a three-year degree, equivalency may be demonstrated, for example, through relevant work experience or additional qualifications.
3. A year of professional education for teaching, or the equivalent in pedagogical content, is helpful.
4. At least one year of relevant, successful, professional experience.

A student may be enrolled in one of the following graduate units:
- Adult Education and Counselling Psychology
- Curriculum, Teaching and Learning
- Human Development and Applied Psychology
- Sociology and Equity Studies in Education
- Theory and Policy Studies in Education

Program of Study
The minimum program requirements for the MEd degree are as follows:
1. Under the direction of one graduate unit, a student undertakes one of four options to complete the program.
   - Option I—Course Work Plus Comprehensive 5.0 full-course equivalents (FCE) plus a comprehensive examination/requirement.
   - Option II—Research Project 4.0 full-course equivalents (FCE) plus a research project or a Major Research Paper.
   - Option III—Thesis 3.0 full-course equivalents (FCE) plus a thesis.
   - Option IV—Course Work Only 5.0 full-course equivalents (FCE).

The MEd degree program requires that a minimum of half of the courses must be taken in the home department unless otherwise specified by the department.
2. All requirements for the degree must be satisfactorily completed within six years of first enrolment.
Fees and Financial Support

Fees

Schedule of Fees
The annual Schedule of Fees, updated each year in June, is available at www.fees.utoronto.ca.

Fees and Registration
New and returning students eligible to register will be mailed their fees invoices prior to the registration period. Payment of fees must be made through a Canadian bank, in Canadian funds, payable to the University of Toronto. Holders of certain scholarships, awards, research assistantships, teaching assistantships, or loans may make arrangements through their graduate unit to defer payment of fees. Students are considered to be registered as soon as they have paid academic and incidental fees or have made appropriate arrangements for deferral of payment. By virtue of being registered, a student thereby agrees to abide by all of the academic and non-academic policies, rules, and regulations of the University of Toronto, the School of Graduate Studies, and the graduate unit in which the student is registered.

Academic Fees Structure
Because the course of study in many graduate units is unstructured and often cannot be described in terms of a specific number of courses, and because graduate education more often than not results from the sum of experience encountered during the program, Graduate School fees are assessed on a program basis rather than on the number of courses taken. Degree Students and Special Students who pay the full-time fee for the previous Fall or Winter Session do not pay fees for the Summer Session. However, Part-time Special Students pay summer fees. In addition, part-time degree students who register for the Summer Session, but who have not registered in both sessions of the previous academic year, pay summer fees.

A degree program is defined on a sessional basis and the full fee is charged regardless of the number of courses taken. All students (except Special Students not proceeding to a degree) are accepted into a program with a minimum period of registration, specified on the offer of admission. This period establishes the minimum degree fee that must be paid before graduation.

In the graduate units of Industrial Relations and Human Resources, Management, and Information Studies, where there is no residence or full-time attendance required and the master's degree is achieved by course work only, the length of program will be determined by the number of full-course equivalents (FCE) required to complete the degree requirements. For example, for the MBA degree:

- Up to 6.0 FCE is equivalent to a 1-year program.
- 6.5 to 8.5 FCE is equivalent to a 1½-year program.
- 9.0 to 12 FCE is equivalent to a 2-year program.
Fees and Financial Support

Full-Time Student Fee
The full-time student fee is charged to a full-time student for the minimum period of registration and all subsequent registrations.

Dual Registrations
Dual registrants will be required to maintain their registration for the master's degree, register also for the PhD degree, and pay only the appropriate PhD fees.

Full-Time Students Commencing a Degree Program in January
Students commencing a degree program in January will pay half the appropriate fee for the year.

Summer Students
Students commencing a degree program in the summer and taking courses will pay the Summer Session fee. These fees are in addition to the annual fees which will be assessed in September.

Students commencing a degree program in September but who start research in the preceding summer do not pay fees for the Summer Session. Continuing Degree Students and Special Students who pay the full-time fee for the previous Fall or Winter Session do not pay fees for the Summer Session. However, part-time Special Students pay summer fees. In addition, part-time degree students who register for the Summer Session, but who have not registered in both sessions of the previous academic year, pay summer fees.

Students returning in the Summer Session from an approved leave (see Leave Policy) do not pay Summer Session fees.

Part-Time Degree Students
Students undertaking their studies on a part-time basis are required to pay the part-time academic and incidental fees each year they register to the completion of their program.

Part-time students engaging in studies for only one session in the Fall or Winter may pay half the part-time fee.

Special Students
Full-time Special Students pay the full academic fee per annum. Special Students enrolling on a part-time basis will pay for each course or half-course. Fees paid as a special student cannot be applied to any subsequent degree program.

Refund dates are different for part-time Special Students. For details check www.fees.utoronto.ca.

Fees for International Students
In accordance with the recommendations of the Ontario government, certain categories of international students are charged academic fees equal to those for Canadian citizens and Permanent Residents (landed immigrants).

If an international student's status in Canada changes during a session, exemption from the higher fees may be granted. The fees will be adjusted in the current session, provided the status change occurs before November 1 in the Fall Session or before February 1 in the Winter Session. Status changes with supporting documents must be reported to the SGS Student Services Office prior to the above deadlines. However, if a status change effective before these dates is reported with a minor delay, fees adjustment may still be possible.

Incidental Fees
Compulsory incidental fees are charged for the Graduate Students' Union, the Health Service, Hart House, the Athletic Centre, and other student services.

Minimum Payment (for other than those registering for only one session)
The first fee payment is due by the end of the September registration period and consists of 60% of the academic fee and 100% of incidental fees. The balance of the required fees may be paid at any time but is due by April 30 without further notice and is subject to monthly service charges.

Service Charges
All outstanding fees, regardless of the source of payment, are subject to a service charge of 1.5% per month compounded (19.56% per annum), first assessed on November 15 and on the 15th of every month thereafter until paid in full.

Late Registration
Any student registering after the deadline date specified in the Academic Calendar is required to pay a late registration fee of $44.00 plus $5.00 for each day of delay to a maximum of $94.00.

Balance of Degree Fee
The length of the program, as defined by the graduate unit, into which a student is admitted predetermines the minimum total academic fee that a student must pay prior to graduation. Many part-time master's students must pay a balance of degree fee prior to graduation.

Full-time students who accelerate their programs and finish the degree requirements in less time than the normal program length must pay a balance of degree fee. If a student has paid more than the full-time program fee due to the time taken to complete the degree requirements, there will be no refund of fees.

Fees for Graduating Master's Students
Master's students who are recommended for graduation by the deadline date for Fall Convocation will not be assessed fees for the Fall Session. Master's students who miss this deadline but complete their degree requirements by January 30, 2009 are required to register for the Fall Session and pay the appropriate fees.
Fees and Financial Support

Fees for Final Year Doctoral Students
Academic fees for the final year will be prorated, based on a 12-month academic year, for the number of months that elapse between September and (including) the month in which the final thesis (including corrections required by the final oral examination committee) is submitted to the School of Graduate Studies. Fees for the final month will not be charged if the requirements are met before the 16th day of the month.

Reinstatement Fees
A reinstatement fee equivalent to the one session full-time fee is applied when a full-time student has been reinstated after the time limit for a period of 12 months.
Part-time students who have been reinstated after the time limit pay part-time fees for the session(s) (one to three sessions) in which they register.

Outstanding Fees and Charges
See General Regulations for policy on academic sanctions for students who have outstanding University obligations.

Receipts for Income Tax
Tuition Fee Certificates are available online at www.rosi.utoronto.ca. There is a charge of $5.00 for the preparation of duplicate receipts.

Transcripts
A $10.00 fee is charged for each copy of a transcript of record. These fees are subject to change. Transcripts will not be issued for students whose fees are in arrears. Transcripts may be ordered from the University of Toronto Transcript Centre, 100 St. George Street, Toronto, Ontario M5S 3G3 or online at www.rosi.utoronto.ca.

Calendars
The entire calendar is accessible on the Web at www.sgs.utoronto.ca. Printed copies of the School of Graduate Studies Calendar may be purchased from the School at a cost of $8.00 each, plus any necessary postage charges. Details and order form are available at www.sgs.utoronto.ca/current/calendar/orderform.asp.

Financial Support

Financial Aid
The University of Toronto gives high priority to the matter of graduate financial support. For many doctoral-stream students, programs commit to a minimum level of funding at the beginning of each year, for up to five years of study. For further information about the funding available from specific programs, see the Graduate Funding Structures document www.sgs.utoronto.ca/current/financial.

Although financial support cannot be guaranteed for all graduate students in all programs, we encourage you to inquire about financial assistance at your academic department or the Graduate Awards Office at the School of Graduate Studies.

Internal Awards
The School of Graduate Studies offers a number of internal awards to meritorious graduate students such as the University of Toronto Fellowships (UTF), the Connaught Scholarship as well as other endowed awards. For more information on internal awards visit http://www.sgs.utoronto.ca/current/financial/scholarshipsfellowshipsdec18.pdf

External Awards
Canadians and landed-immigrants may also apply for external support in the form of scholarships and fellowships offered by the Natural Sciences and Engineering Research Council of Canada (www.nserc.ca), the Social Sciences and Humanities Research Council of Canada (www.sshrc.ca) and the Canadian Institutes of Health Research (www.cihr.ca). All three granting councils (NSERC, SSHRC, and CIHR) also offer Canadian Graduate Scholarships (CGS).

The Government of the Province of Ontario provides graduate scholarships tenable at Ontario universities. Ontario Graduate Scholarships (http://osap.gov.on.ca/eng/not_secure/Plan_Grants_full_sepapp_OGS_12345.htm) are available for graduate studies in all disciplines. Sixty of these awards are available to visa students.

Ontario Graduate Scholarships in Science and Technology (OGSST) are designed to encourage excellence in graduate studies in science and technology; only available to Canadian citizens or permanent residents.

Ontario Student Assistance Program (OSAP)
The federal and provincial governments provide financial support to qualified students who are Canadian citizens or permanent residents of Ontario. The loan amount depends on your calculated financial need. Students can apply online at /osap.gov.on.ca/

Awards for Non-Canadians
In addition to the internal funding normally available to all international students, a number of external funding sources can also be explored. For more information on
Financial Support

awards for non-Canadians, please visit www.sgs.utoronto.ca/prospective/financial/international.asp. International students are encouraged to apply for all possible funding opportunities in their home country.

Other Funding Sources

Teaching Assistantships
Some graduate units hire teaching assistants who spend up to 10 hours a week conducting tutorials, grading undergraduate essays/exams, and acting as a resource for undergraduate students. For further information, write to the chair of your graduate unit, giving full particulars of your academic training and experience.

Research Assistantships
Research assistants normally work with a faculty member, assisting with research projects. Apply directly to the graduate unit chair concerned.

Financial Need

Emergency Grant Program
The Emergency Grant Program is designed to assist currently registered, full-time graduate students beyond their first year of studies who generally are not part of the funded cohort, and who encounter an unanticipated serious financial emergency. This is not considered to be a source of routine or long-term funding. For more information on the Emergency Grant Program, visit http://www.sgs.utoronto.ca/current/financial/bursary_and_loans.asp.

Emergency Loan Program
The Emergency Loan Program is designed to alleviate temporary cash flow problems for students who are expecting to receive a payment in the near future. The maximum loan amount is $500 and is interest free until the mutually agreed upon repayment date. For more information on the Emergency Grant Program, visit www.sgs.utoronto.ca/current/financial/bursary_and_loans.asp.

Financial Counselling
Financial counselling can relieve stress, resolve immediate financial problems, and help plan for the future. Financial Counsellors are trained to assist students in all aspects of financial management including budget planning and debt load management. Financial counselling sessions are confidential and available to graduate students free of charge. To schedule an appointment, contact the Graduate Awards Office by telephone (416) 946-0808 or by e-mail graduate.awards@utoronto.ca.
A variety of student support, opportunities, and infrastructure is available to graduate students at the University of Toronto. Here is a sample listing of many of the most commonly sought after organizations and services. More diversified information is available from the Web sites listed here as well as those available from www.students.utoronto.ca/servicesandlinks.htm.

Accessibility Services
Anti-Racism and Cultural Diversity
Athletic Facilities and Programs
Career Centre
Community Safety
Counselling and Learning Skills Services
English Language and Writing Support
Family Care
Graduate Student Initiative
Graduate Students' Union
Hart House
Health
Housing
International Student Centre
Lesbian, Gay, Bisexual, Transgendered, Queer Resources and Programs
Library System
Ombudsperson
Sexual Harassment
Status of Women

Accessibility Services

University of Toronto - St. George
E-mail: disability.services@utoronto.ca
Web: disability.sa.utoronto.ca

University of Toronto at Mississauga
E-mail: eamartin@utm.utoronto.ca
Web: www.erin.utoronto.ca/~w3access

University of Toronto at Scarborough
E-mail: ability@utsc.utoronto.ca
Web: www.utsc.utoronto.ca/ability

Anti–Racism and Cultural Diversity
E-mail: antiracism@utoronto.ca
Web: www.antiracism.utoronto.ca

Athletic Facilities and Programs
Athletic Centre
Varsity Centre for Physical Activity and Health
Web: www.athletics.utoronto.ca/

Career Centre
University of Toronto Career Centre
Web: www.careers.utoronto.ca
Services for Students

Community Safety
Web: www.communitysafety.utoronto.ca

Counselling and Learning Skills Services (CALSS)
Web: www.calss.utoronto.ca

English Language and Writing Support (ELWS)
E-mail: jane.freeman@utoronto.ca
Web: www.sgs.utoronto.ca/english

Family Care
E-mail: family.care@utoronto.ca
Web: www.familycare.utoronto.ca/

Graduate Student Initiative (GSI)
Web: www.studentservices.utoronto.ca/gsi

Graduate Students’ Union (GSU)
E-mail: info.gsu@utoronto.ca
Web: www.gsu.utoronto.ca

Hart House
Web: www.harthouse.ca

Health

Health Service
E-mail: health.services@utoronto.ca
Web: www.utoronto.ca/health/

Psychiatric Service
Telephone: (416) 978-8070
Web: www.utoronto.ca/psychservices/

Housing

University Student Housing and Off Campus Housing

St. George Campus
E-mail: housing.services@utoronto.ca
Web: www.housing.utoronto.ca

Student Family Housing
E-mail: family.housing@utoronto.ca
Web: www.housing.utoronto.ca

University of Toronto Mississauga
E-mail: resdesk@utm.utoronto.ca
Web: www.utm.utoronto.ca/housing

University of Toronto Scarborough
E-mail: residences-office@utsc.utoronto.ca
Web: www.utsc.utoronto.ca/

Residences on Campus

Graduate House
E-mail: information.gradhouse@utoronto.ca
admissions.gradhouse@utoronto.ca
Web: www.sgs.utoronto.ca/gradhouse

Massey College
E-mail: g.sharpe@utoronto.ca
Web: www.utoronto.ca/massey/

International Student Centre (ISC)
E-mail: isc.information@utoronto.ca
Web: www.isc.utoronto.ca

Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ) Resources and Programs
Web: www.lgbtq.utoronto.ca

Library System
E-mail: utweb@library.utoronto.ca
Web: www.library.utoronto.ca

Resource Centre for Academic Technology (RCAT)
E-mail: info.rcat@utoronto.ca
Web: www.rcat.utoronto.ca

Ombudsperson
E-mail: ombuds.person@utoronto.ca
Web: www.utoronto.ca/ombudsperson

Sexual Harassment, Education, Counselling, and Complaint Office
Web: www.utoronto.ca/sho
www.enough.utoronto.ca/ (regarding online harassment)

Status of Women
E-mail: status.women@utoronto.ca
Web: www.status-women.utoronto.ca
Graduate Faculty

There are three categories of graduate faculty. This section contains a single alphabetical listing of full members and members emeriti; the home department is listed. Associate members, which form the third category, are listed in the graduate unit entries in which they hold an appointment.

For more details about each faculty member’s appointment category, degrees, honours, and chairs held, consult the graduate unit entry. Information is also available on the SGS Web site (www.sgs.utoronto.ca).

Full Members and Members Emeriti

A
Parham Aarabi - Electrical & Computer Engineering
Jonathan Abbatt - Chemistry
Mohamed Abdelhaleem - Laboratory Medicine & Pathobiology
Abdo Abdelmessih - Mechanical & Industrial Engineering
Tarek Abdelrahman - Electrical & Computer Engineering
Baher Abdulhai - Civil Engineering
Sharon Abel - Medical Science
Mounir AbouHaidar - Cell & Systems Biology
Roberto Abraham - Astronomy & Astrophysics
Rona Abramovitch - Psychology
Peter Abrams - Ecology & Evolutionary Biology
L Jane Abray - History
Robert Accinelli - History
Sandra Acker - Sociology & Equity Studies in Education
Alan Ackerman - English
Edgar Joel Acosta - Chemical Engineering & Applied Chemistry
Thomas Adamowski - English
Barry Adams - Civil Engineering
Susan Adamson - Physiology
Jean Addington - Medical Science
Khosrow Adeli - Laboratory Medicine & Pathobiology
Emanuel Adler - Political Science
Raviraj Adve - Electrical & Computer Engineering
Anil Agrawal - Ecology & Evolutionary Biology
Victor Aguirregabiria - Economics
Anne Agur - Medical Science
William Aide - Music
Donald Ainslie - Philosophy
Paul Aird - Forestry
Phyllis Airhart - Religion
J. Stewart Aitchison - Electrical & Computer Engineering
Johan Aitken - Curriculum, Teaching & Learning
Varouj Aivazian - Economics
Suzanne Akbari - English
Mustafa Akcoglu - Mathematics
Virginia Aksan - Near & Middle Eastern Civilizations
Ramona Alagia - Social Work
Claude Alain - Psychology
Gavin Alderson-Smith - Anthropology
Dionne Allem - Mechanical & Industrial Engineering
Mary (Jacqui) Alexander - Women & Gender Studies
Michelle Alexopoulos - Economics
Johane Allard - Medical Science
Christine Allen - Pharmaceutical Sciences
D Grant Allen - Chemical Engineering & Applied Chemistry
Derek Allen - Philosophy
Donald Allen - Mechanical & Industrial Engineering
Patrick Allen - Curriculum, Teaching & Learning
Peter Allen - English
Kenneth Allison - Public Health Sciences
Thomas Allouay - Psychology
Benjamin Alman - Medical Science
Veronika Ambros - Slavic
Terry Amburgey - Management
Joel Amernic - Management
Graduate Faculty

Cristina Amon - Mechanical & Industrial Engineering
Carl Amrhein - Geography
Cristiana Amza - Electrical & Computer Engineering
Robert Andersen - Sociology
Adam Anderson - Psychology
Christy Anderson - Art
Geoff Anderson - Health Policy, Management & Evaluation
Gerald Anderson - Nutritional Sciences
Gordon Anderson - Economics
Gregor Anderson - Geology
James Anderson - Ecology & Evolutionary Biology
Nicole Anderson - Psychology
Stephen Anderson - Theory & Policy Studies in Education
Maydianne Andrade - Ecology & Evolutionary Biology
Edward Andrew - Political Science
Brenda Jean Andrews - Molecular Genetics
David Andrews - Statistics
Gavin John Andrews - Public Health Sciences
Robert Andrews - Civil Engineering
Irene Andrilus - Molecular Genetics
Omer Angel - Mathematics
Janet Angus - Nursing Science
Eileen Antone - Adult Education & Counselling Psychology
Rashid Anwar - Biochemistry
Michael Archer - Mathematics
Jane Antoun - Ecology & Evolutionary Biology
George Arhonditsis - Geography
Sergey Arkhipov - Mathematics
Kay Armatage - Drama
Raffi Armenian - Music
Lawrin Armstrong - Medieval Studies
Mary Louise Arnold - Human Development & Applied Psychology
Sonja Arntzen - East Asian Studies
Cheryl Arrowsmith - Medical Biophysics
James Arthur - Mathematics
Paweł Artyomowicz - Astronomy & Astrophysics
Sylvia Asa - Laboratory Medicine & Pathobiology
Frederick Asals - English
Nasser Ashgriz - Mechanical & Industrial Engineering
Mary Jane Ashley - Public Health Sciences
Sidney Aster - History
Janet Astington - Human Development & Applied Psychology
John Aston - Drama
Leslie Atkinson - Psychology
Liliana Attisano - Biochemistry
Isabelle Aubert - Laboratory Medicine & Pathobiology
Jane Aubin - Molecular Genetics
Julie Auët - Biomedical Engineering
Karl Aust - Materials Science & Engineering
Henry Austin - English
Roberta Austin - European, Russian, & Eurasian Studies
Zubin Austin - Pharmaceutical Sciences
Igor Averbakh - Management
Gage Averill - Music
George Awad - Medical Science
Arthur Axelrad - Medical Biophysics

B
Fahiem Bacchus - Computer Science
Peter Backx - Medical Science
Gary Bader - Molecular Genetics
Robin Badgley - Public Health Sciences
Elizabeth Badley - Public Health Sciences
Ronald Baeccker - Computer Science
Michael Bagby - Medical Science
Darius Bagil - Medical Science
Brian Baigrie - History & Philosophy of Science & Technology
David Bailey - Physics
Richard Bailey - Physics
Andrew Baines - Laboratory Medicine & Pathobiology
Cornelia Baines - Public Health Sciences
William Baines - Mechanical & Industrial Engineering
George Baird - Architecture, Landscape, & Design
John Baird - English
Allan Baker - Ecology & Evolutionary Biology
Andrew Baker - Medical Science
G. Ross Baker - Health Policy, Management & Evaluation
Michael Baker - Economics
Michael Baker - Medical Science
Robert Baker - Biochemistry
Robert Baker - Ecology & Evolutionary Biology
Ravin Balakrishnan - Computer Science
Jorge Balan - Theory & Policy Studies in Education
John Balatinecz - Forestry
Ashmet Baris Balcioglu - Mechanical & Industrial Engineering
Bernd Baldus - Sociology
Stephen Balke - Chemical Engineering & Applied Chemistry
Peri Ballantyne - Pharmaceutical Sciences
Keith Balmain - Electrical & Computer Engineering
Sandra Bamford - Anthropology
Salvatore Bancheri - Italian
Edward Banning - Anthropology
Brenda Banwell - Medical Science
Bharati Bapat - Laboratory Medicine & Pathobiology
Howard Barbee - Medical Science
Edward Barbeau - History & Philosophy of Science & Technology
Brian Barber - Immunology
Dwayne Barber - Medical Biophysics
Berj Bardakjian - Electrical & Computer Engineering
Tim Barfoot - Aerospace Science & Engineering
Joshua Barker - Anthropology
Dr. Bar-Natan - Mathematics
Christopher Barnes - Slavic
Timothy Barnes - Classics
Debora E Barnett Foster - Dentistry
Rachel Barney - Classics
Janet Barnsley - Health Policy, Management & Evaluation
Cathy Barr - Medical Science
F. Michael Barrett - Cell & Systems Biology
Spencer Barrett - Ecology & Evolutionary Biology
Lee Bartel - Music
Kenneth Bartlett - History
Bruce Barton - Drama
Sylvain Baruchel - Medical Science
<table>
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<th>Name</th>
<th>Department</th>
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<tr>
<td>Virginijus Barzda</td>
<td>Physics</td>
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<td>Nina Bascia</td>
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<td>Claire Bombardier</td>
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<td>Susan Bondy</td>
<td>Public Health Sciences</td>
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<td>Richard Bonert</td>
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Graduate Faculty

Anthony Bonner - Computer Science
David Boocock - Chemical Engineering & Applied Chemistry
Heather Boon - Pharmaceutical Sciences
Charlie Boone - Molecular Genetics
Rudy Boonstra - Ecology & Evolutionary Biology
David Booth - Curriculum, Teaching & Learning
James Booth - Immunology
Laurence Booth - Management
Sandford Borins - Management
Allan Borodin - Computer Science
Douglas Bors - Psychology
Kathryn Ann Boschen - Rehabilitation Science
Robert Bothwell - History
Gabrielle Boulianne - Molecular Genetics
Peter Boultin - Electrical & Computer Engineering
Larry Bourne - Geography
Nicole Boursier - French
Craig Boutilier - Computer Science
Barry Bowen - Pharmaceutical Sciences
William Bowden - Music
Dwight Boyd - Theory & Policy Studies in Education
Monica Boyd - Sociology
Norman Boyd - Nutritional Sciences
Joseph Boyle - Philosophy
T. Douglas Bradley - Medical Science
Donald Branch - Medical Science
Loren Brandt - Economics
Brian Branfireun - Geography
Aurel Braun - Political Science
Donald Brean - Management
Roderick Angus Bremer - Laboratory Medicine & Pathobiology
James Brenan - Geology
David Brenner - Statistics
Tim Bressmann - Speech-Language Pathology
Margot Breton - Social Work
Raymond Breton - Sociology
M. Clare Brett - Curriculum, Teaching & Learning
Julie Brill - Molecular Genetics
Robert Glen Bristow - Medical Biophysics
John Britton - Geography
Michael Bronskill - Medical Biophysics
Adrian Brook - Chemistry
Daniel Brooks - Ecology & Evolutionary Biology
Dina Brooks - Physical Therapy
Leonard Brooks - Management
Mireille Broucke - Electrical & Computer Engineering
Dianne Brousseau - Medical Science
Anne-Marie Brousseau - French
Samuel Broverman - Statistics
Elspeth Brown - History
Grant Brown - Biochemistry
Ian Brown - Cell & Systems Biology
James Brown - Philosophy
Martha Brown - Molecular Genetics
Robert Craig Brown - History
Russell Brown - English
Stephen Brown - Electrical & Computer Engineering
Theodore Brown - Physiology
Virginia Brown - Medieval Studies

David Brownfield - Sociology
John Brownlee - History
Patricia Brubaker - Physiology
Ashley Bruce - Cell & Systems Biology
Robert Bruce - Nutritional Sciences
Patricia Bruckmann - English
Alan S Brudner - Law
John Brumell - Molecular Genetics
Paul Bruner - Chemistry
Jutta Brunnee - Law
Lawrence Brunner - Statistics
James Brunton - Medical Science
Chriester Bruun - Classics
Rorke Bryan - Forestry
Joseph Bryant - Religion
Robert Brym - Sociology
Manuel Buchwald - Molecular Genetics
Ragnar-Olaf Buchweitz - Mathematics
Leslie Buck - Cell & Systems Biology
Antje Budde - Drama
Ronald Buliung - Geography
Shelley Bull - Public Health Sciences
Michael Bunce - Geography
Almut Burchard - Mathematics
Jonathan Burgess - Classics
Ralph Burgess - Dentistry
James Burke - Spanish
Willetts Burnham - Pharmacology & Toxicology
Peter Burns - Medical Biophysics
Lori Burrows - Medical Science
Bonnie Burstow - Adult Education & Counselling
Psychology
Frances Burton - Anthropology
Markus Bussmann - Mechanical & Industrial Engineering
Usanda Busto - Pharmaceutical Sciences
Yvonne Margareth Buys - Medical Science
Philip Byer - Civil Engineering

C

Nadia Caidi - Information Studies
M. Celia Cain - Music
Christopher Caldarone - Biomedical Engineering
John Callahan - Biochemistry
William Callahan - History
Jeffrey Callen - Management
Liviana Calzavara - Public Health Sciences
David Cameron - Political Science
Elspeth Cameron - English
Linda Cameron - Curriculum, Teaching & Learning
Douglas Campbell - Sociology
Elizabeth Campbell - Curriculum, Teaching & Learning
James Campbell - Molecular Genetics
Malcolm Campbell - Cell & Systems Biology
Michele Campolieti - Industrial Relations & Human Resources
John Canfield - Philosophy
Isabella Caniggia - Physiology
Rocco Capozzi - Italian
Joseph Carens - Political Science
Raymond Carlberg - Astronomy & Astrophysics
Peter Carlen - Physiology

52 Full Members and Members Emeriti
Terence Carleton - Ecology & Evolutionary Biology
James Carlyle - Immunology
Heather Carnahan - Occupational Science & Occupational Therapy
Jean-Bernard Caron - Geology
Jack Carr - Economics
Peter Carstens - Anthropology
Anne Carswell - Occupational Science & Occupational Therapy
Michael Carter - Mechanical & Industrial Engineering
Jeremy Carver - Molecular Genetics
Francois Casas - Economics
Michael Casas - Dentistry
Jill Caskey - Art
Robert Casper - Medical Science
John Caspens - Forestry
David Cassidy - Public Health Sciences
Pamela Catton - Medical Science
Mark Cattral - Medical Science
Daniel Cattran - Medical Science
Charles Chaffey - Chemical Engineering & Applied Chemistry
Avijit Chakrabarty - Medical Biophysics
Anjan Chakravarty - History & Philosophy of Science & Technology
Tigran Chalikian - Pharmaceutical Sciences
Catherine Chalin Clark - Public Health Sciences
John Challis - Physiology
Beverley Chalmers - Nursing Science
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Craig Chambers - Psychology
Douglas Chambers - English
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Simone Chambers - Political Science
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Hue Sun Chan - Biochemistry
Ka Nin Chan - Music
Voon Chan - Molecular Genetics
Warren Chan - Biomedical Engineering
Anthony Chan Carusone - Electrical & Computer Engineering
Sanjeev Chandra - Mechanical & Industrial Engineering
Belinda Chang - Ecology & Evolutionary Biology
Bruce Chapman - Law
Kenneth Chapman - Exercise Sciences
Michael Charles - Chemical Engineering & Applied Chemistry
Milton Charlton - Physiology
Alison Chasteen - Psychology
Tom Chau - Biomedical Engineering
Michael Chazan - Anthropology
Marsha Chechik - Computer Science
Mark Cheetham - Art
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Jik Chin - Chemistry
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Han Cho - Physics
Man-Duen Choi - Mathematics
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Brian Ciruna - Molecular Genetics
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Caryl Clark - Music
Philip Clark - Philosophy
David Clarke - Medical Science
E Alene Clarke - Public Health Sciences
George Elliott Clarke - English
Joe Clarke - Medical Science
William Clarke - Astronomy & Astrophysics
Stephen Clarkson - Political Science
William Cleghorn - Mechanical & Industrial Engineering
Andrew Clement - Information Studies
Christine Clement - Astronomy & Astrophysics
Maurice Clement - Astronomy & Astrophysics
Cameron Clokie - Dentistry
Cecile Cloutier-Wojciechowska - French
William Cluett - Chemical Engineering & Applied Chemistry
Allan Coates - Physiology
Michael Cobb - English
Richard Cobbold - Biomedical Engineering
David Coburn - Public Health Sciences
Isabelle Cochetin - History
Alan Cochrane - Molecular Genetics
Rhonda Cockrell - Health Policy, Management & Evaluation
Richard Code - Physics
Adam Cohen - Art
Amos Cohen - Immunology
Joanna Cohen - Public Health Sciences
Jon Cohen - Economics
Marsha Cohen - Health Policy, Management & Evaluation
Paul Cohen - History
Rina Cohen - Curriculum, Teaching & Learning
Zane Cohen - Medical Science
Jillian Cohen-Kohler - Pharmaceutical Sciences
Laura Colantoni - Spanish
Graduate Faculty

Angela Colantonio - Occupational Science & Occupational Therapy
Ardra Cole - Adult Education & Counselling Psychology
David Cole - Laboratory Medicine & Pathobiology
Donald Cole - Public Health Sciences
Edward Cole - Medical Science
William Cole - Medical Science
John Coleman - Cell & Systems Biology
John Coles - Medical Science
James Collander - Mathematics
Michael Collins - Civil Engineering
Nicholas Collins - Ecology & Evolutionary Biology
Richard Collins - Molecular Genetics
Rebecca Comay - Philosophy
Carola Conle - Curriculum, Teaching & Learning
Michael Connelly - Curriculum, Teaching & Learning
Philip Connelly - Laboratory Medicine & Pathobiology
Mariano Consens - Mechanical & Industrial Engineering
Tenley Conway - Geography
David Cook - Political Science
Eleanor Cook - English
Ramsay Cook - History
Rebecca Cook - Law
Stephen Cook - Computer Science
Karyn Cooper - Curriculum, Teaching & Learning
Paul Cooper - Forestry
Nancy Copeland - Drama
Sabine Cordes - Molecular Genetics
Mary Corey - Public Health Sciences
Paul Corey - Public Health Sciences
Donald Cormack - Chemical Engineering & Applied Chemistry
Brian Cormen - English
Derek Cornell - Computer Science
Carl Corter - Human Development & Applied Psychology
Kenneth Corts - Management
Brenda Cossman - Law
Pierre Cote - Public Health Sciences
Stephane Cote - Management
Cheryl Cott - Physical Therapy
Michelle Cotterchio - Public Health Sciences
Gary Coupland - Anthropology
David Courtman - Laboratory Medicine & Pathobiology
Deborah Cowen - Geography
Leah Cowen - Molecular Genetics
Sharon Cowling - Geography
Elizabeth Cowper - Linguistics
Brian Cox - Materials Science & Engineering
Thomas Coyle - Materials Science & Engineering
Peter C Coyte - Health Policy, Management & Evaluation
Angela Cozea - French
Barbara Craig - Information Studies
Fergus Craik - Psychology
Virgil Radu Craiu - Statistics
Adrian Crawford - Civil Engineering
Gary Crawford - Anthropology
George Scott Cree - Psychology
John Crispo - Management
Ken Croitoru - Medical Science
Alexander Cruden - Geology
Imre Csizmadia - Chemistry
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Joseph Culotti - Molecular Genetics
Tony Culver - Health Policy, Management & Evaluation
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James Cummins - Curriculum, Teaching & Learning
Alastair Cunningham - Medical Biophysics
Frank Cunningham - Philosophy
Hilary Cunningham - Anthropology
John Cunningham - Psychology
William Cunningham - Psychology
Gerald Chaim Cupchik - Psychology
John Curran - Civil Engineering
Douglas Currie - Ecology & Evolutionary Biology
Iain Currie - Mechanical & Industrial Engineering
Michael Cusimano - Medical Science
Asher Cutter - Ecology & Evolutionary Biology
Ernest Cutf - Laboratory Medicine & Pathobiology
Dennis Cvitkovich - Dentistry
Myron Cybulsky - Laboratory Medicine & Pathobiology
Helene Cyr - Ecology & Evolutionary Biology

D
Abdallah Daar - Public Health Sciences
Lucia Dacome - History & Philosophy of Science & Technology
Alan Dainard - French
Christopher Damaren - Aerospace Science & Engineering
Ettore Vincenzo Damiano - Economics
Denis Daneman - Medical Science
Meredith Daneman - Psychology
Marcel Danesi - Anthropology
Amrita Daniere - Anthropology
Jayne Danska - Geography
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Pierre Desrochers - Geography
Sherwin Desser - Cell & Systems Biology
Darrell Desveaux - Cell & Systems Biology
Allan Detsky - Health Policy, Management & Evaluation
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Michael Dewar - Classics
Donald Dewees - Economics
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Miriam Diamond - Geography
James DiCenzo - Religion
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Timothy Dickinson - Ecology & Evolutionary Biology
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Peter Dietsche - Theory & Policy Studies in Education
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Peter Dirks - Laboratory Medicine & Pathobiology
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Daniel Duggan - Law
James Dungan - Geography
Scott Eddie - Economics
Aled Edwards - Medical Biophysics
Darryl Edwards - Music
Elizabeth Edwards - Chemical Engineering & Applied Chemistry
Richard Edwards - Physics

Full Members and Members Emeriti  55
Graduate Faculty

Sean Egan - Molecular Genetics
Margrit Eichler - Sociology & Equity Studies in Education
Thomas Einarson - Pharmaceutical Sciences
Gillian Einstein - Psychology
John Eisenberg - Theory & Policy Studies in Education
Konrad Eisenbichler - Italian
Moshe Eizenman - Biomedical Engineering
Alis Ekmecki - Aerospace Science & Engineering
Modris Eksteins - History
Tamer El-Diraby - Civil Engineering
Luba Eleen - Art
George Eleftheriades - Electrical & Computer Engineering
Ramy Elitzur - Management
Charles Elkabas - French
Rodolphe El-Khoury - Architecture, Landscape, & Design
Faith Ellen - Computer Science
Richard Ellen - Dentistry
Erich Ellers - Mathematics
George Elliott - Mathematics
Robin Elliott - Music
James Ellis - Molecular Genetics
Keith Aa Ellis - Spanish
Omar El-Mowafy - Dentistry
Ahmed El-Sohemy - Nutritional Sciences
M. Reza Emami - Aerospace Science & Engineering
Andrew Emili - Molecular Genetics
Anver Emon - Law
Laszlo Endrenyi - Pharmacology & Toxicology
Mark Engstrom - Ecology & Evolutionary Biology
Wayne Enright - Computer Science
Suzanne Erb - Psychology
Uwe Erb - Materials Science & Engineering
Bonnie Erickson - Sociology
Patricia Erickson - Sociology
Alice Eriks-Brophy - Speech-Language Pathology
Andres Erosa - Economics
Deborah Esch - English
Michael Escobar - Public Health Sciences
Uzoma Esonwanne - English
George Espie - Cell & Systems Biology
Mary Jane Esplen - Nursing Science
James Estes - History
Edward Etchells - Medical Science
C Ross Ethier - Mechanical & Industrial Engineering
James Eubanks - Medical Science
Gregory Evans - Chemical Engineering & Applied Chemistry
Martin Evans - Management
Michael Evans - Statistics
Nicholas Everett - History
Martin Paul Evison - Anthropology
Bjorn Ewald - Art
Nicholas Eyles - Geology
Dickson Eyoh - Political Science
Gail Eyssen - Public Health Sciences
Sheeren Ezzat - Medical Science

F
Miquel Faig - Economics
Thomas Fairgrieve - Computer Science
Alexander Falconer - French
Victor Falkenheim - Political Science
George Fantus - Medical Science
James Farge - Medieval Studies
Matthew Farish - Geography
Diane Farmer - Sociology & Equity Studies in Education
Ramin Farhood - Chemical Engineering & Applied Chemistry
Joseph Farrell - Curriculum, Teaching & Learning
Guy Faulkner - Exercise Sciences
Yiftach Fehige - History & Philosophy of Science & Technology
Michael Fehlings - Medical Science
Anthony Feinstein - Medical Science
Ulrich Feki - Chemistry
Brian Feldman - Health Policy, Management & Evaluation
Zhong Ping Feng - Physiology
Angelica Fenner - German
Robert Fenton - Mechanical & Industrial Engineering
Gillian Fenwick - English
Susanne Ferber - Psychology
Bruce Ferguson - Public Health Sciences
Geoffrey Fernie - Biomedical Engineering
John Fernie - Astronomy & Astrophysics
Michel Ferrari - Human Development & Applied Psychology
Robert Ferrence - Public Health Sciences
Grant Ferris - Geology
Lorraine Ferris - Public Health Sciences
Andrey Feuerverger - Statistics
Grace Feuerverger - Curriculum, Teaching & Learning
Edward Fillery - Dentistry
Jorge Filmus - Medical Biophysics
Sarah Finkelstein - Geography
Michael Finlayson - History
Benedikt Fischer - Public Health Sciences
Eleanor Fish - Immunology
Joel Fish - Medical Science
Joseph Fisher - Medical Science
Brian Fitch - French
Margaret Fitch - Nursing Science
Peter Fitting - French
Eugene Fiume - Computer Science
Frederick Flahiff - English
John Flanagan - Medical Science
James Fleck - Management
David James Fleet - Computer Science
Alison Fleming - Psychology
E Patricia Fleming - Information Studies
John Fleming - French
Neil Flesgner - Medical Science
Joseph Fletcher - Political Science
Paul Fletcher - Psychology
Alastair Flint - Medical Science
Colleen Flood - Law
John Floras - Medical Science
Richard Florida - Management
John Floyd - Economics
<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
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<tbody>
<tr>
<td>Patrick Foley</td>
<td>Mechanical &amp; Industrial Engineering</td>
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<td>Eric Fong</td>
<td>Sociology</td>
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<td>David Foot</td>
<td>Economics</td>
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<td>Donald Forbes</td>
<td>Political Science</td>
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<td>Maureen Ford</td>
<td>Theory &amp; Policy Studies in Education</td>
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<td>Julie Forman-Kay</td>
<td>Biochemistry</td>
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<td>Giovanni Forni</td>
<td>Mathematics</td>
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<td>Christopher Forrest</td>
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<td>Marie-Josee Fortin</td>
<td>Ecology &amp; Evolutionary Biology</td>
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<td>Paul Fortin</td>
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<td>Stuart Foster</td>
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<td>Georgia Fotopoulos</td>
<td>Civil Engineering</td>
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<td>Frank Foulkes</td>
<td>Chemical Engineering &amp; Applied Chemistry</td>
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<td>Marc Fournier</td>
<td>Psychology</td>
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<td>Bonnie Fox</td>
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<td>Harry Fox</td>
<td>Religion</td>
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<td>Mark Fox</td>
<td>Mechanical &amp; Industrial Engineering</td>
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<tr>
<td>Antonio Franceschetti</td>
<td>Italian</td>
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<td>Bruce Francis</td>
<td>Electrical &amp; Computer Engineering</td>
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<td>John Frank</td>
<td>Public Health Sciences</td>
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<td>Roberta Frank</td>
<td>Medieval Studies</td>
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<td>Paul Frankland</td>
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<td>Ursula Franklin</td>
<td>Materials Science &amp; Engineering</td>
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<td>Paul Franks</td>
<td>Philosophy</td>
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<tr>
<td>Lori Frappier</td>
<td>Molecular Genetics</td>
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<td>Craig Fraser</td>
<td>History &amp; Philosophy of Science &amp; Technology</td>
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<td>Simon John Fraser</td>
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<td>Richard Frecker</td>
<td>Biomedical Engineering</td>
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<td>Jonathan Freedman</td>
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<td>Stephen Fresmes</td>
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<td>Normand Frenette</td>
<td>Curriculum, Teaching &amp; Learning</td>
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<td>Brendan Frey</td>
<td>Electrical &amp; Computer Engineering</td>
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<td>Judith Friedland</td>
<td>Occupational Science &amp; Occupational Therapy</td>
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<td>Martin Friedland</td>
<td>Law</td>
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<td>John Friedlander</td>
<td>Mathematics</td>
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<td>Shimon Friedman</td>
<td>Dentistry</td>
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<td>Harriet Friedmann</td>
<td>Sociology</td>
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<td>Sharon Friefeld</td>
<td>Occupational Science &amp; Occupational Therapy</td>
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<td>T Max Friesen</td>
<td>Anthropology</td>
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<td>James Fullard</td>
<td>Ecology &amp; Evolutionary Biology</td>
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<td>Esme Fuller-Thomson</td>
<td>Social Work</td>
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<td>Roberta Fulthorpe</td>
<td>Ecology &amp; Evolutionary Biology</td>
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<td>Barbara Funnell</td>
<td>Molecular Genetics</td>
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<td>Melvyn Fuss</td>
<td>Economics</td>
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<tr>
<td>Maria Luisa Fuster</td>
<td>Economics</td>
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<tr>
<td>Gunter Gad</td>
<td>Geography</td>
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<tr>
<td>Antoinette Gagne</td>
<td>Curriculum, Teaching &amp; Learning</td>
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<tr>
<td>Herbert Gaisano</td>
<td>Medical Science</td>
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<tr>
<td>David Galbraith</td>
<td>English</td>
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<td>Kathleen Marie Gallagher</td>
<td>Curriculum, Teaching &amp; Learning</td>
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<td>Brenda Gallie</td>
<td>Molecular Genetics</td>
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<td>Steven Gallinger</td>
<td>Medical Science</td>
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<td>Ruth Gallop</td>
<td>Nursing Science</td>
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<td>John Galloway</td>
<td>Geography</td>
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<td>Peter Gamlin</td>
<td>Adult Education &amp; Counselling Psychology</td>
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<tr>
<td>Jerzy Ganczarczyk</td>
<td>Civil Engineering</td>
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<td>Yashar Ganjali</td>
<td>Computer Science</td>
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<td>Ralph Garber</td>
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<td>Paul Garfinkel</td>
<td>Medical Science</td>
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<td>Jean Garepy</td>
<td>Medical Biophysics</td>
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<td>Frances Garrett</td>
<td>Religion</td>
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<td>Robert Garrison</td>
<td>Astronomy &amp; Astrophysics</td>
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<tr>
<td>Libby Garshowitz</td>
<td>Near &amp; Middle Eastern Civilizations</td>
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<tr>
<td>Rosemary Gartner</td>
<td>Criminology</td>
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<td>Jane Gaskell</td>
<td>Theory &amp; Policy Studies in Education</td>
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<tr>
<td>Denise Gastaldo</td>
<td>Nursing Science</td>
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<td>Douglas Paul Gauvreau</td>
<td>Civil Engineering</td>
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<td>Charles Genno</td>
<td>German</td>
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<td>Roman Genov</td>
<td>Electrical &amp; Computer Engineering</td>
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<tr>
<td>Susan George</td>
<td>Pharmacology &amp; Toxicology</td>
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<td>Tony George</td>
<td>Psychology</td>
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<td>Usha George</td>
<td>Social Work</td>
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<td>Michael Georges</td>
<td>Chemistry</td>
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<td>Diane Gerin-Lajoie</td>
<td>Curriculum, Teaching &amp; Learning</td>
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<td>Robert Gerlai</td>
<td>Psychology</td>
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<td>Lloyd Gerson</td>
<td>Philosophy</td>
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<td>Meric Gertler</td>
<td>Geography</td>
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<td>Michael Gervers</td>
<td>History</td>
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<td>Esther Geva</td>
<td>Human Development &amp; Applied Psychology</td>
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<td>Rebecca Ghent</td>
<td>Geology</td>
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<td>Adria Giacca</td>
<td>Physiology</td>
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<td>Guri Giaever</td>
<td>Pharmaceutical Sciences</td>
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<td>Robert Gibbs</td>
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<td>David Gibo</td>
<td>Ecology &amp; Evolutionary Biology</td>
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<td>Manuela Gieri</td>
<td>Italian</td>
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<td>Monique Gignac</td>
<td>Public Health Sciences</td>
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<td>Emily Gilbert</td>
<td>Geography</td>
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<td>Richard Gilbert</td>
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<td>Joseph Gillis</td>
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<td>Brendan Gillon</td>
<td>History &amp; Philosophy of Science &amp; Technology</td>
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<tr>
<td>Anne-Claude Gingras</td>
<td>Molecular Genetics</td>
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<td>Yves Gingras</td>
<td>History &amp; Philosophy of Science &amp; Technology</td>
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<tr>
<td>Stephen Girardin</td>
<td>Laboratory Medicine &amp; Pathobiology</td>
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<td>Luigi Girolametto</td>
<td>Speech-Language Pathology</td>
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<td>Dafna Gladman</td>
<td>Medical Science</td>
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<tr>
<td>Richard Glazer</td>
<td>Health Policy, Management &amp; Evaluation</td>
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<tr>
<td>Robert Glickman</td>
<td>Spanish</td>
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<td>Judith Globerman</td>
<td>Social Work</td>
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<td>Michael Glogauer</td>
<td>Dentistry</td>
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<tr>
<td>John Glover</td>
<td>Biochemistry</td>
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<tr>
<td>Dorothea Godt</td>
<td>Cell &amp; Systems Biology</td>
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<tr>
<td>Ashvin Goel</td>
<td>Electrical &amp; Computer Engineering</td>
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<td>Vivek Goel</td>
<td>Health Policy, Management &amp; Evaluation</td>
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<tr>
<td>Joseph Goering</td>
<td>History</td>
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<tr>
<td>Paula Goering</td>
<td>Medical Science</td>
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<td>Willi Goetschel</td>
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<td>Walter Goffart</td>
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<td>Chemistry</td>
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<td>Marvin Gold</td>
<td>Molecular Genetics</td>
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<td>Brian Golden</td>
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<td>Andrei Goldenberg</td>
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<td>Gerald Joseph Goldenberg</td>
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<td>Marlene Beth Goldman</td>
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<td>Daniel Goldstick</td>
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<td>Lisa Golombek</td>
<td>Near &amp; Middle Eastern Civilizations</td>
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<td>Robert Goode</td>
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<td>Michael Stephen Goodstadt</td>
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<td>Kaniashka Goonewardena</td>
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<td>Avrum Gottlieb</td>
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<tr>
<td>Nicholas Griffin</td>
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<td>Marc Grynpas</td>
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<td>Krzysztof Grzymski</td>
<td>Near &amp; Middle Eastern Civilizations</td>
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<td>Francesco Guardiani</td>
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<td>Axel Guenther</td>
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<td>Sebastian Guenther</td>
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<td>Abhijit Guha</td>
<td>Medical Science</td>
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<td>Statistics</td>
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<td>Mary Alice Gutman</td>
<td>Adult Education &amp; Counselling &amp; Psychology</td>
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<td>Darryl Gwynne</td>
<td>Ecology &amp; Evolutionary Biology</td>
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<th>Name</th>
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<tr>
<td>Anthony Haasz</td>
<td>Aerospace Science &amp; Engineering</td>
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<td>Denis Hache</td>
<td>Theory &amp; Policy Studies in Education</td>
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<td>Ian Hacking</td>
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<td>Mary Hannah</td>
<td>Health Policy, Management &amp; Evaluation</td>
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<td>Jorn Hansen</td>
<td>Aerospace Science &amp; Engineering</td>
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<tr>
<td>Randall Hansen</td>
<td>Political Science</td>
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</tbody>
</table>

58 Full Members and Members Emeriti
Graduate Faculty

Wahidul Haque - Mathematics
Birgit Harley - Curriculum, Teaching & Learning
Elizabeth Harney - Art
Patricia Harper - Pharmacology & Toxicology
Amir Harrak - Near & Middle Eastern Civilizations
Lea Anne Harrington - Medical Biophysics
Tony Harris - Cell & Systems Biology
Alexander Harrison - Chemistry
Rene Harrison - Cell & Systems Biology
Timothy Harrison - Near & Middle Eastern Civilizations
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Edward Harvey - Sociology
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Ezra Hauer - Civil Engineering
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Scott Hawkins - Management
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David Hedley - Medical Biophysics
Heiko Heerklotz - Pharmaceutical Sciences
Johannes Heersche - Dentistry
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Walid Hejazi - Management
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Greig Henderson - English
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Angela Hildyard - Theory & Policy Studies in Education
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Aleskander Hinek - Laboratory Medicine & Pathobiology
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Gad Horowitz - Political Science
Sandra Horst - Music
Ignatius Horstmann - Management
Arthur Hosios - Economics
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Jim Hu - Medical Science
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Kullervo Hynynen - Medical Biophysics  

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Edward Iacobucci - Law  
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Mitsuhiko Ikura - Medical Biophysics  
Tadanobu Inaba - Pharmacology & Toxicology  
John Ingham - History  
C James Inglis - Biochemistry  
Robert Inman - Medical Science  
Braden Inwood - Classics  
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Marjorie Irwin - Classics  
Meredith Irwin - Medical Science  
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Norman Iscove - Medical Biophysics  
Judy Iseke-Barnes - Sociology & Equity Studies in Education  
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Milton Israel - History  
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Gwendolyn Ivy - Psychology  
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Reiner Jaakson - Geography  
Donald Jackson - Ecology & Evolutionary Biology  
Heather Jackson - English  
James Jackson - English  
Kenneth Jackson - Computer Science  
Nancy Jackson - Adult Education & Counselling Psychology  
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Jan Jongstra - Immunology
Steve Joordens - Psychology
Charles Jones - Sociology
Dylan Jones - Physics
Gaynor Grey Jones - Music
Glen Jones - Theory & Policy Studies in Education
Nicola Jones - Physiology
Jan Jongstra - Immunology
Steve Joordens - Psychology

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Suzanne Kamel-Reid - Laboratory Medicine & Pathobiology
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Anne Lancashire - English
D Ian Lancashire - English
Krista Lantcol - Pharmacology & Toxicology
Richard Landon - English
Byron Lane - Biochemistry
Daniel Lang - Theory & Policy Studies in Education
Norma Lang - Social Work
Angela Lange - Cell & Systems Biology
Lynda Lange - Philosophy
B Lowell Langille - Laboratory Medicine & Pathobiology
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Ellen Larsen - Cell & Systems Biology
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Martha Latta - Anthropology
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Andreas Laupacis - Health Policy, Management & Evaluation
Mark Lautens - Chemistry
Douglas Lavers - Electrical & Computer Engineering
James Lavery - Public Health Sciences
Brigitte Laviole - Molecular Genetics
Sharmistha Law - Management
Herenia Lawrence - Dentistry
Yuri Lawryshtyn - Chemical Engineering & Applied Chemistry
Todd Lawson - Near & Middle Eastern Civilizations
Stephen Lawton - Theory & Policy Studies in Education
Alan Lazarus - Medical Science
Dzung Le - Pharmacology & Toxicology
Roland Le Huenen - French
James Leake - Dentistry
Julie LeBlanc - French
Lawrence LeDuc - Political Science
Chi-Guhn Lee - Mechanical & Industrial Engineering
E Stewart Lee - Electrical & Computer Engineering
Martin Lee - Physics
Ping Lee - Pharmaceutical Sciences
Richard Lee - Anthropology
Sherry Lee - Music
Alexander Leggatt - English
Elizabeth Mm Legge - Art
Shawn Lehman - Anthropology
Peter Lehn - Electrical & Computer Engineering
Emile Lehouck - French
Lawrence Alan Leiter - Nutritional Sciences
Larry Leith - Exercise Sciences
Kenneth Leithwood - Theory & Policy Studies in Education

62 Full Members and Members Emeriti
Louise Lemieux-Charles - Health Policy, Management & Evaluation
Trudo Lemmens - Law
James Lemon - Geography
Helen Lenskyj - Sociology & Equity Studies in Education
Pedro Leon - Spanish
Pierre Leon - French
Garry Leonard - English
Kevin Leonard - Health Policy, Management & Evaluation
Ronald Leprohon - Near & Middle Eastern Civilizations
William Leriche - Public Health Sciences
Deborah Leslie - Geography
John Lester - Astronomy & Astrophysics
Michelle Letarte - Immunology
Michael Lettieri - Italian
Mark Levene - English
Jill Levenson - English
Trevor Levere - History & Philosophy of Science & Technology
Hector Levesque - Computer Science
Ofer Levi - Biomedical Engineering
Ron Levi - Criminology
Benjamin Levin - Theory & Policy Studies in Education
Michael Levin - Anthropology
Brian Levine - Psychology
David Levine - Theory & Policy Studies in Education
Joel Levine - Ecology & Evolutionary Biology
Wendy Levinson - Medical Science
Evonne Levy - Art
Gary Levy - Medical Science
Gary Lewis - Medical Science
Marc Lewis - Human Development & Applied Psychology
Peter Lewis - Biochemistry
Robert Lewis - Geography
Susanna Lewis - Molecular Genetics
Baocun Li - Electrical & Computer Engineering
Hao Li - Economics
Hao Li - English
Peter Pun Li - Pharmacology & Toxicology
Ren-Ke Li - Medical Science
Tania Li - Anthropology
Victor Li - English
Yue Li - Management
Keryn Lian - Materials Science & Engineering
Ben Liang - Electrical & Computer Engineering
Leonid Libkin - Computer Science
David Lie - Electrical & Computer Engineering
Jorg Liebeherr - Electrical & Computer Engineering
Bernard Liebott - Medical Science
Bernard Lightman - History & Philosophy of Science & Technology
Ernie Lightman - Social Work
W. Conrad Liles - Medical Science
Lothar Lilge - Medical Biophysics
Ryan Lilien - Computer Science
Teng Joon Lim - Electrical & Computer Engineering
Anthony Liman - East Asian Studies
Hardy Limeback - Dentistry
Martin Lin - Philosophy
Xiaodong Lin - Statistics

Ralph Lindheim - Slavic
Peter Lindsay - Human Development & Applied Psychology
Thomas Lindsay - Medical Science
Lorelei Lingard - Theory & Policy Studies in Education
Clifford Lingwood - Laboratory Medicine & Pathobiology
Paul Links - Medical Science
Howard Lipshitz - Molecular Genetics
Carla Lipeis-Mumme - Industrial Relations & Human Resources
Albert Litherland - Physics
Fei-Fei Liu - Medical Biophysics
Geoffrey Liu - Medical Biophysics
Hugh Liu - Aerospace Science & Engineering
Jun Liu - Molecular Genetics
Mingyao Liu - Medical Science
Peter Liu - Medical Science
Peter Liu - Physiology
Leonid Livak - Slavic
David Livingstone - Sociology & Equity Studies in Education
Sue Lloyd - Art
Trevor Lloyd - History
Hoi-Kwong Lo - Electrical & Computer Engineering
Marius Locke - Exercise Sciences
David Locker - Dentistry
Robert Lockhart - Psychology
Penelope Lockwood - Psychology
Lori Loeb - History
Alexander Logan - Health Policy, Management & Evaluation
Robert Logan - Physics
Michael Lord - French
Joseph Lorimer - Mathematics
Wen-Yi Wendy Lou - Public Health Sciences
Rhonda Love - Public Health Sciences
David Lovejoy - Cell & Systems Biology
Nathan Richard Lovejoy - Ecology & Evolutionary Biology
Maureen Lovett - Psychology
Donald Low - Laboratory Medicine & Pathobiology
Julian Lowman - Astronomy & Astrophysics
Andres Lozano - Medical Science
Wei Yang Lu - Medical Science
Zheng-Hong Lu - Materials Science & Engineering
Peter Ludlow - Philosophy
Gergely Lukacs - Biochemistry
Michael Luke - Physics
Charles Lumsden - Medical Science
Hy Van Luong - Anthropology
George Luste - Physics
R. Theodore Lutz - Near & Middle Eastern Civilizations
Rein Luus - Chemical Engineering & Applied Chemistry
Stephen Ly - Physiology
Deidre Lynch - English
Richard Lynn - East Asian Studies
Mikhail Lyubich - Mathematics
Graduate Faculty

M
Scott Mabury - Chemistry
Hugh MacCollum - English
Geoffrey MacDonald - Psychology
John MacDonald - Physiology
Kelly MacDonald - Medical Science
Ken MacDonald - Geography
Lorna Macdonald - Music
Peter Macdonald - Chemistry
Robert Macdonald - Medical Science
Russell MacDonald - Medical Science
Laurel MacDowell - History
Robert MacFadden - Social Work
Robert Macgregor - Pharmaceutical Sciences
Jeffrey Macintosh - Law
Donald Mackay - Chemical Engineering & Applied Chemistry
Gillian MacKay - Music
William Mackay - Physiology
Linda MacKeigan - Pharmaceutical Sciences
Patrick Macklem - Law
Audrey Macklin - Law
Virginia MacLaren - Geography
Heather MacLean - Civil Engineering
Wallace James MacLean - Electrical & Computer Engineering
David Maclellan - Biochemistry
Margaret MacMillan - History
Margaret MacNeill - Exercise Sciences
Jay Macpherson - English
John Magee - Classics
William Magee - Sociology
Aner Magen - Computer Science
Manfredi Maggiore - Electrical & Computer Engineering
Dennis Magill - Sociology
Jamie-Lynn Magnusson - Theory & Policy Studies in Education
Lynne Magnusson - English
Paul Magoci - Political Science
Radhakrishnan Mahadevan - Chemical Engineering & Applied Chemistry
John Mahieu - Economics
Jan Mahrt-Smith - Management
Minelle Mahtani - Geography
Don Mahuran - Laboratory Medicine & Pathobiology
Jens-Erik Mai - Information Studies
Lynda Mainwaring - Exercise Sciences
Tak Mak - Medical Biophysics
Brian Maki - Medical Science
Viliam Makis - Mechanical & Industrial Engineering
Jay Malcolm - Forestry
David Malkin - Medical Science
Andreas Mandelis - Mechanical & Industrial Engineering
Robert Mann - Public Health Sciences
Steve Mann - Electrical & Computer Engineering
Lisa Manne - Ecology & Evolutionary Biology
Morris Manolson - Dentistry
Armen Manoukian - Medical Biophysics
Ronald Manzer - Political Science
Peter Josef Marbach - Computer Science
Robin Marjoribanks - Physics
Frederick Marker - English
Alexander Marks - Biochemistry
Michael Marmura - Near & Middle Eastern Civilizations
Loraine Marrett - Public Health Sciences
Michael Marrus - History
Tanya Mars - Art
Philip Marsden - Medical Science
John Marshall - Medical Science
John Marshall - Religion
Victor Marshall - Public Health Sciences
Joan Marshman - Pharmaceutical Sciences
Anne Martel - Medical Biophysics
David Martell - Forestry
Alberto Martin - Immunology
John Martin - Physics
Kenneth Martin - Electrical & Computer Engineering
Peter Martin - Theoretical Astrophysics
Philippe Martin - French
Roger Martin - Management
Rosemary Martino - Speech-Language Pathology
Joaquim Martins - Aerospace Science & Engineering
Elsa Marziali - Social Work
Andrew Mason - Ecology & Evolutionary Biology
Hugh Mason - Classics
Diane Massam - Linguistics
John Massey - Art
David Masson - Mathematics
Emma Master - Chemical Engineering & Applied Chemistry
Gilbert Mathewson - Economics
Rudolf Mathon - Computer Science
Mohan Matthen - Philosophy
Robert Matthews - Political Science
Stephen Matthews - Physiology
Jill Matus - English
Christopher Matzner - Astronomy & Astrophysics
Jamsheed D Mavalwala - Anthropology
Albert May - Physics
Hartwig Mayer - German
John Mayhall - Dentistry
Pauline Mazumdar - History & Philosophy of Science & Technology
Tony Mazzulli - Laboratory Medicine & Pathobiology
John McAndrews - Ecology & Evolutionary Biology
Mary Patricia McAndrews - Psychology
Brenda McCabe - Civil Engineering
Susan McCahan - Mechanical & Industrial Engineering
Robert McCann - Mathematics
Patricia McCarney - Political Science
John Alan McClelland - French
Robert McClelland - Chemistry
Ryan McClelland - Music
James McConica - Medieval Studies
James McCool - Mathematics
Peter McCourt - Cell & Systems Biology
Susan McCracken - Management
Christopher McCulloch - Dentistry
Ernest McCulloch - Medical Biophysics
Thomas McCurdy - Management
Lynn McDonald - Social Work
Christopher McDonough - Classics
Peggy McDonough - Public Health Sciences
Douglas McDougall - Curriculum, Teaching & Learning
Philip McDunough - Statistics
Bonnie McElhinny - Anthropology
William McEvily - Management
Anita McGahan - Management
Martin McGavin - Laboratory Medicine & Pathobiology
Linda McGillis - Nursing Science
Kathy McGilton - Nursing Science
Jane Mcglade-Dolson - Medical Biophysics
Mark McGowan - History
Deborah McGregor - Geography
Sheila McIlraith - Computer Science
William McIlroy - Physical Therapy
Roderick McInnes - Molecular Genetics
C. Thomas McIntire - Religion
Anthony Randal McIntosh - Psychology
Nancy McKee - Medical Science
Patricia McKeever - Nursing Science
Colin McKerlie - Laboratory Medicine & Pathobiology
Martin McKneally - Medical Science
John Ross Mclaughlin - Public Health Sciences
Peter McLaughlin - Medical Science
Joanne McLaurin - Laboratory Medicine & Pathobiology
Stewart McLean - Chemistry
Tom Mclellan - Exercise Sciences
Deborah McLennan - Ecology & Evolutionary Biology
Kenneth McLeod - Music
Robert Mcleod - English
Robert McMillen - Chemistry
Neil McMullin - Religion
Helen McNeill - Molecular Genetics
Angus McQuibban - Biochemistry
Tirzah Meacham - Near & Middle Eastern Civilizations
Jeffrey Medin - Medical Biophysics
Shaker Meguid - Mechanical & Industrial Engineering
Nitin Mehta - Management
Eckhard Meinrenken - Mathematics
Angelo Melino - Economics
Eric Mendelsohn - Mathematics
Julie Mendelson - Speech-Language Pathology
Marc Meneghini - Molecular Genetics
Yue Meng - East Asian Studies
Ulrich Menzel - Management
Michael Menzinger - Chemistry
Brian Merriës - French
Hans Messner - Medical Science
Kelly Metcalfe - Nursing Science
Sarianna Metso - Near & Middle Eastern Civilizations
Mark Meyerson - History
Michael Meyn - Molecular Genetics
Andrew Mill - Geology
William Michelson - Sociology
Pascal Michelucci - French
Solveiga Miezitis - Adult Education & Counselling
Psychology
Alex Mihailescu - Occupational Science & Occupational Therapy
Grigory Mikhailov - Mathematics
David Mikulis - Medical Science
Angela Miles - Adult Education & Counselling Psychology
Norton Milgram - Psychology
Paul Milgram - Mechanical & Industrial Engineering
Bernd Milker - Physics
Anthony Miller - Public Health Sciences
Eric Miller - Civil Engineering
Fiona Miller - Health Policy, Management & Evaluation
Fredi Miller - Molecular Genetics
Heather Miller - Anthropology
John Miller - Curriculum, Teaching & Learning
Judith Miller - Medical Science
R J Dwayne Miller - Chemistry
Renee Miller - Computer Science
Richard Miller - Medical Biophysics
Jane Millgate - English
Michael Millgate - English
James Mills - Mechanical & Industrial Engineering
Kenneth Mills - History
Linda Mills - Physiology
Margaret Millson - Public Health Sciences
Pierre Milman - Mathematics
Joseph Miniter - Management
Charles Mims - Chemical Engineering & Applied Chemistry
Berger Minassian - Medical Science
Mark Minden - Medical Biophysics
Salomon Minkin - Medical Biophysics
Joe Minta - Laboratory Medicine & Pathobiology
Kiran Mrchandani - Adult Education & Counselling Psychology
John Miron - Geography
Cheryl Misak - Philosophy
Dieter Misgeld - Theory & Policy Studies in Education
Faye Mishna - Social Work
Andrew Mitchell - Management
Jane Mitchell - Pharmacology & Toxicology
Matthew Mitchell - Management
Jerry Mitrovic - Physics
Stefan Mochnacki - Astronomy & Astrophysics
David Mock - Dentistry
Gordon Moe - Medical Science
Jason Moffat - Molecular Genetics
Donald Moggridge - Economics
Jeremy Mogridge - Laboratory Medicine & Pathobiology
Bibhu Mohanty - Civil Engineering
Shahrzad Mojab - Adult Education & Counselling Psychology
Mohammad Mojahedi - Electrical & Computer Engineering
Harvey Moldofsky - Medical Science
Mhina (Michael) Moldoveanu - Management
Michael Molen - Mechanical & Industrial Engineering
Michael Molloy - Computer Science
Jean-Marc Moncalvo - Ecology & Evolutionary Biology
Ashley Monks - Psychology
Philippe Monnier - Physiology
Alan Moody - Medical Science
Dae-Sik Moon - Astronomy & Astrophysics
Chris Moore - Human Development & Applied Psychology
GW Kent Moore - Physics
Malcolm Moore - Pharmacology & Toxicology
Laurence Moran - Biochemistry
Mayo Moran - Law
Michael Moran - Molecular Genetics
Cecilia Louise Morgan - Theory & Policy Studies in Education
Edward Morgan - Law
Kathryn Morgan - Philosophy
Jennifer Morri - History
Quaid Morris - Molecular Genetics
Robert Morris - Chemistry
Stephen Morris - Physics
Margaret Morrison - Philosophy
Cindi Marie Morshhead - Medical Science
Desmond Morton - History
Mario Moscarello - Biochemistry
Morris Moscovich - Psychology
Andreas Moschos - Electrical & Computer Engineering
Andrea Most - English
Javad Mostaghimi - Mechanical & Industrial Engineering
Andreas Motsch - French
Howard Mount - Medical Science
Nick Mount - English
Nicholas Mrosovsky - Cell & Systems Biology
Amy Mullin - Philosophy
Karen Mundy - Adult Education & Counselling Psychology
James Mungall - Geology
Sanda Munjic - Spanish
D Scott Munro - Geography
Ian Munro - Nutritional Sciences
John Munro - Economics
Carles Muntaner - Nursing Science
Kunio Murasugi - Mathematics
Helios Murialdo - Molecular Genetics
Fiona Murnaghan - Mathematics
Jennifer Murphy - Chemistry
Michelle Murphy - History
Robert Murphy - Ecology & Evolutionary Biology
Alexander Murray - History
Heather Murray - English
Norman Murray - Theoretical Astrophysics
Robert Murray - Biochemistry
Vijayakumar Murty - Mathematics
Nakanyike Musisi - History
Cameron Mustard - Public Health Sciences
Paul Muter - Psychology
Linda Muzzin - Theory & Policy Studies in Education
Ted Myers - Public Health Sciences
John Myles - Sociology
John Mylopoulos - Computer Science

Alexander Nabutovsky - Mathematics
Adrian Nachman - Mathematics
Sukriti Nag - Laboratory Medicine & Pathobiology
Shuichi Nagata - Anthropology
Jennifer Nagel - Philosophy
Hani Naguib - Mechanical & Industrial Engineering
Andras Nagy - Molecular Genetics
Philip Nagy - Curriculum, Teaching & Learning
John Nairn - Pharmaceutical Sciences
Farid Najm - Electrical & Computer Engineering
Hindy Najman - Religion
Kazuko Nakajima - East Asian Studies
Anthony Naldrett - Geology
Valentina Napolitano - Anthropology
Claudio Naranjo - Pharmacology & Toxicology
Steven Narod - Public Health Sciences
Joanne Nash - Cell & Systems Biology
Jagdish Nautiyal - Forestry
William Navarre - Molecular Genetics
C. David Naylor - Public Health Sciences
Juvenal Ndayiragije - French
Radford Neal - Statistics
Jennifer R Nedelsky - Political Science
Benjamin Neel - Medical Biophysics
Erminio Neglia - Spanish
Sioban Nelson - Nursing Science
Wendy Nelson - History
Peter Nesselroth - French
C. Barth Netterfield - Astronomy & Astrophysics
Shirley Neuman - English
A Wilhelm Neumann - Mechanical & Industrial Engineering
Neil Nevitte - Political Science
Judith Newman - Religion
Roger Charles Newman - Chemical Engineering & Applied Chemistry
Melanie Newton - History
Sheila Neyesmith - Social Work
Dominic Ng - Physiology
Roxana Ng - Adult Education & Counselling Psychology
Wai Tung Ng - Electrical & Computer Engineering
Heyu Ni - Laboratory Medicine & Pathobiology
Graeme Nicholson - Religion
Matthias Niemeier - Psychology
Martina Nieswandt - Curriculum, Teaching & Learning
Emmanuel Nikiema - French
Shizuhiko Nishisato - Curriculum, Teaching & Learning
Corey Nislow - Molecular Genetics
Jose Nobrega - Pharmacology & Toxicology
Janet Noel - History
Jun Nogami - Materials Science & Engineering
Geoffrey Norris - Geology
Thomas North - Materials Science & Engineering
Linda Northrup - Near & Middle Eastern Civilizations
Kenneth Norwich - Physiology
David Novak - Religion
Arnold Noyek - Public Health Sciences
John Noyes - German
David Nussbaum - Psychology
Mary Nyquist - English
Graduate Faculty

O
Keith Oatley - Human Development & Applied Psychology
Peter John O'Brien - Pharmaceutical Sciences
Linda-Lee O'Brien-Pallas - Nursing Science
Hugh Mervyn O'Brodovich - Medical Science
Patricia O'Campo - Public Health Sciences
Joseph O'Connell - Religion
Deborah O'Connor - Nutritional Sciences
Danton O'Day - Cell & Systems Biology
Patrick O'Donnell - Physics
Brian O'dowd - Pharmacology & Toxicology
Pam Ohashi - Medical Biophysics
Michael Ohh - Laboratory Medicine & Pathobiology
Arne Ohlsson - Health Policy, Management & Evaluation
Allan Okey - Pharmacology & Toxicology
William Oliver - French
Nancy Olivier - Medical Science
Marion Olmsted - Medical Science
Christopher Olsen - Theory & Policy Studies in Education
David Olson - Human Development & Applied Psychology
Paul Olson - Sociology & Equity Studies in Education
Sidney Olyan - Social Work
Daniel Ondrack - Management
Mariel O'Neill-Karch - French
Michal Opas - Laboratory Medicine & Pathobiology
Andrew Orchard - Medieval Studies
Ian Orchard - Cell & Systems Biology
Phillip Oreopoulos - Economics
Robert Orr - Physics
Beverley Orser - Physiology
Clifford Orwin - Political Science
Donna Orwin - Slavic
Richard Osborn - Public Health Sciences
Lucy Osborne - Molecular Genetics
Martin Osborne - Economics
Victor Ostapchuk - Near & Middle Eastern Civilizations
Roger O'Toole - Sociology
Peter Ottensmeyer - Medical Biophysics
Joanne Oxlery - Management
Hilmi Ozcelik - Laboratory Medicine & Pathobiology
Geoffrey Ozin - Chemistry

P
Cecil Pace-Asciak - Pharmacology & Toxicology
Jeffrey Packer - Civil Engineering
Marian Packham - Biochemistry
Susan Padro - Theory & Policy Studies in Education
Emil Pai - Biochemistry
Christopher Paige - Medical Biophysics
Robert Painter - Biochemistry
Nades Palaniyar - Laboratory Medicine & Pathobiology
Daman Panesar - Civil Engineering
Cho Pang - Medical Science
K Sandy Pang - Pharmaceutical Sciences
Vladimiro Papangelakis - Chemical Engineering & Applied Chemistry
Joseph Paradisi - Chemical Engineering & Applied Chemistry
Arun Paramekanti - Physics
Chul Park - Mechanical & Industrial Engineering
Brian Parker - English
James Parker - Music
John Parker - Medical Science
Mary Ann Parker - Music
Thomas Parker - Medical Science
Patricia Parkin - Medical Science
John Parkinson - Biochemistry
Esteban Parra - Anthropology
Charles Pascal - Theory & Policy Studies in Education
Subbarayan Pasupathy - Electrical & Computer Engineering
Janet Paterson - French
Dennis Patrick - Music
Julian Patrick - English
Louis Pauly - Political Science
Peter Pauly - Management
Lacra Pavel - Electrical & Computer Engineering
Walter Pavlic - Slavic
Anthony Pawson - Molecular Genetics
Christopher Pearson - Molecular Genetics
Erminia Pedretti - Curriculum, Teaching & Learning
Amanda Peet - Physics
John Peevor - Cell & Systems Biology
York Po-Chee Pei - Medical Science
Janette Pelletier - Human Development & Applied Psychology
Laurence Pelletier - Molecular Genetics
W Richard Pellettier - Physics
Ue-Li Pen - Theoretical Astrophysics
Paul Pencharz - Nutritional Sciences
Steven Penfold - History
Gerald Penn - Computer Science
Linda Penn - Medical Biophysics
Peter Pennfather - Pharmaceutical Sciences
John Pennner - Molecular Genetics
Josef Penninger - Medical Biophysics
Derek Penslar - History
Anthony Percival - Spanish
Carol Percy - English
John Percy - Astronomy & Astrophysics
Jose Luis Perez Velazquez - Medical Science
Ana Teresa Perez-Leroux - Spanish
Doug Perovic - Materials Science & Engineering
Paul Perron - French
John Perz - Physics
James Pesando - Economics
Elizabeth Peter-Hardtke - Nursing Science
Jordan Peterson - Psychology
Michele Peterson-Badali - Human Development & Applied Psychology
Ted Petit - Psychology
Laura Ann Pettito - Psychology
Arturas Petronis - Medical Science
Susan Pfeiffer - Anthropology
David Phillips - Information Studies
James Phillips - Law
Mary Phillips - Medical Biophysics
Robert Phillips - Chemical Engineering & Applied Chemistry
Stuart Philpott - Anthropology
Graduate Faculty

Kathy Pichora-Fuller - Psychology
Terry Picton - Psychology
Edward Pien - Art
Ruth Pierson - Sociology & Equity Studies in Education
Albert Pietersma - Near & Middle Eastern Civilizations
Domenico Pietropaolo - Italian
Jean-Phillipe Pignol - Medical Biophysics
Robert Pilliar - Dentistry
Micheline Piquette-Miller - Pharmaceutical Sciences
Toniiann Pitassi - Computer Science
Carolyn Pitchik - Economics
Andrew Plaks - East Asian Studies
Richard Plant - Drama
Konstantinos Plataniotis - Electrical & Computer Engineering
Donald Plewes - Medical Biophysics
Patricia Pliner - Psychology
Michael Plyley - Exercise Sciences
Anthony Poe - Chemistry
Blake Poland - Public Health Sciences
John Polanyi - Chemistry
Helene Polatajko-Howell - Occupational Science & Occupational Therapy
Janet Polivy - Psychology
Regis Pomes - Biochemistry
Constantin Ponomareff - Slavic
Joyce Poon - Electrical & Computer Engineering
Milos Popovic - Biomedical Engineering
Erich Poppitz - Physics
Yannick Portebois - French
John Portelli - Theory & Policy Studies in Education
Morton Posner - Mechanical & Industrial Engineering
Martin Post - Physiology
Constantine Poulos - Psychology
Philippe Poussier - Immunology
John Powell - Chemistry
Jay Pratt - Psychology
R Cranford Pratt - Political Science
Alison Prentice - Theory & Policy Studies in Education
Kim Pressnail - Civil Engineering
Anthony Price - Geography
Dorothy Pringle - Nursing Science
Kenneth Pritzker - Laboratory Medicine & Pathobiology
Gil Prive - Medical Biophysics
Aleksandar Prodic - Electrical & Computer Engineering
Terry Promane - Music
Scott Prosser - Chemistry
Nicholas Provart - Cell & Systems Biology
Scott Prudham - Geography
Gerald Prud'homme - Laboratory Medicine & Pathobiology
Ronald Pruessner - History
Charles Pugh - Mathematics
Mary Pugh - Mathematics
Olga Pugliese - Italian
David Pulleyblank - Biochemistry
James Purdham - Public Health Sciences
Jennifer Purtle - Art
Russell Pysyklywec - Geology

Q
Li Qian - Electrical & Computer Engineering
Susan Elizabeth Quaggin - Medical Science
Jack Quarter - Adult Education & Counselling Psychology
Jeremy Quastel - Mathematics
Ato Quayson - English

R
Marlene Rabinovitch - Medical Science
Janet Raboud - Public Health Sciences
David Raby - History
Charles Rackoff - Computer Science
Ian Radforth - History
Milica Radisic - Biomedical Engineering
Manny Radomska - Exercise Sciences
Diana Raffman - Philosophy
J Ambrose Raftis - Medieval Studies
Martin Ralph - Psychology
Margaret Rand - Laboratory Medicine & Pathobiology
Katharine Rankin - Geography
A Venketeshwer Rao - Nutritional Sciences
Doreen Rao - Music
Leticia Rao - Medical Science
Vivek Rao - Medical Science
Alexander Rapoport - Music
Susan Rappolt - Occupational Science & Occupational Therapy
Michael Ratcliffe - Immunology
A Michael Rauth - Medical Biophysics
Arun Ravindran - Medical Science
J Alan Rawlinson - Medical Biophysics
Ajit Ray - Anthropology
Peter Ray - Molecular Genetics
David Rayside - Political Science
Sherene Razack - Sociology & Equity Studies in Education
Paul Read - Music
Stanley Read - Medical Science
Denise Reaume - Law
Magdalene Redekop - English
Donald Redelmeier - Health Policy, Management & Evaluation
Douglas Reeve - Chemical Engineering & Applied Chemistry
Cheryl Regehr - Social Work
Glenn Regehr - Theory & Policy Studies in Education
Henry Regier - Environment
Jurgen Rehm - Public Health Sciences
John Reibetanz - English
Peter Reich - Linguistics
Denise Reid - Occupational Science & Occupational Therapy
Dennis Reid - Art
Frank Reid - Economics
Lloyd Reid - Aerospace Science & Engineering
Nancy Reid - Statistics
Stephen Reid - Cell & Systems Biology
James Reilly - Near & Middle Eastern Civilizations
Raymond Reilly - Pharmaceutical Sciences
Eyal Reingold - Psychology
Marciano Reis - Laboratory Medicine & Pathobiology
Robert Reisz - Ecology & Evolutionary Biology
Reinhart Reithmeier - Biochemistry
Jeffrey Reitz - Sociology
Edward Relph - Geography
Gary Remington - Medical Science
Robert Remis - Public Health Sciences
Rebecca Renwick - Occupational Science & Occupational Therapy
Joseph Repka - Mathematics
Diego Restuccia - Economics
James Retallack - History
Rebecca Reuber - Management
Martin Revermann - Drama
Jeffrey Reynolds - Music
Roger Reynolds - Medieval Studies
W. John Reynolds - Chemistry
Richard Reznick - Medical Science
John Ricco - Art
Keren Rice - Linguistics
Larry Richards - Architecture, Landscape, & Design
Robin Richards - Medical Science
Douglas Richardson - Art
G. Peter Richardson - Religion
Gordon Richardson - Management
Warnie Richardson - Sociology & Equity Studies in Education
David Riddick - Pharmacology & Toxicology
Timothy Ries - Music
George Rigg - Medieval Studies
Charles Rigg - Cell & Systems Biology
Marcel Rindsbacher - Management
Gordon Richardson - Management
Arthur S. Ripstein - Law
James Rising - Ecology & Evolutionary Biology
John Rist - Classics
Velimir Ristic - Electrical & Computer Engineering
Kerry Ritlitch - Law
Kent Roach - Law
Emmet Robbins - Classics
Yves Roberge - French
Joanne Roberts - Economics
Timothy Roberts - Medical Science
Ann Robertson - Public Health Sciences
Ian Robertson - History
Janice Robertson - Laboratory Medicine & Pathobiology
Pierre-Yves Robin - Geology
William Robins - English
Brian Robinson - Biochemistry
Vincent Robinson - Geography
Ann Robson - History
Jonathan Rocheleau - Biomedical Engineering
Elizabeth Rochon - Speech-Language Pathology
Frederic Rochon - Mathematics
Paula Rochon - Health Policy, Management & Evaluation
Stephen Rockel - History
F. Helen Rodd - Ecology & Evolutionary Biology
John Roder - Molecular Genetics
Carol Rodgers - Exercise Sciences
Gary Rodin - Medical Science
Nestor Rodriguez - Spanish
Henry Rogers - Linguistics
Tracy Rogers - Anthropology
Carol Rogerson - Law
Chaim Roifman - Immunology
N. Carol Rolheiser - Curriculum, Teaching & Learning
Wendy Rolph - Spanish
Shauna Rolston - Music
Myroslava Romach - Medical Science
Richard Roman - Sociology
Patricia Romans - Cell & Systems Biology
Johanna Rommens - Molecular Genetics
Paul Rooney - Mathematics
Matthew Roorda - Civil Engineering
David Rootman - Medical Science
Irving Rootman - Public Health Sciences
David Rose - Medical Biophysics
Jonathan Rose - Electrical & Computer Engineering
Mark Rosenberg - History & Philosophy of Science & Technology
Norman Rosenblum - Medical Science
Jeffrey Rosenthal - Statistics
Peter Rosenthal - Mathematics
Heather Ross - Medical Science
Jill Ross - Comparative Literature
John Ross - Curriculum, Teaching & Learning
Robert Bruce Ross - Dentistry
Janet Rossant - Molecular Genetics
Walter Rosser - Public Health Sciences
Andrew Rossos - History
Wendy Rotenberg - Management
Natalie Rothman - History
Daniela Rotin - Biochemistry
Regina Rotman - Mathematics
Abraham Rotstein - Political Science
Ori Rotstein - Medical Science
Robert Rottapel - Immunology
Maria Rotundo - Management
Sean Rourke - Medical Science
Joanne Rovet - Human Development & Applied Psychology
David Rowe - Physics
Locke Rowe - Ecology & Evolutionary Biology
Sam Roweis - Computer Science
Shoukry Roweis - Geography
Dean Rowe-Magnus - Laboratory Medicine & Pathobiology
John Rowlands - Medical Biophysics
Timothy Rowley - Management
Dibyendu Roy - Forestry
Peter John Roy - Molecular Genetics
Maria Rozakis-Adcock - Laboratory Medicine & Pathobiology
Marleen Rozemond - Philosophy
Barry Rubin - Medical Science
Laurence Rubin - Medical Science
Catherine Rubincam - Classics
Arthur Rubinoff - Political Science
John Rubinstein - Biochemistry
John L. Rubinstein - Biochemistry
Slavko Rucinski - Astronomy & Astrophysics
Graduate Faculty

John Rucklidge - Geology
Harry Ruda - Materials Science & Engineering
Susan Ruddick - Geography
Karin Ruhrdanz - Near & Middle Eastern Civilizations
Klaas Ruitenbeek - East Asian Studies
Stephen Rupp - Spanish
Paul Rutherford - History
James Rutka - Laboratory Medicine & Pathobiology
John Rutter - Materials Science & Engineering
James Ryan - Theory & Policy Studies in Education
Jennifer Ryan - Psychology

S
Creso Sa - Theory & Policy Studies in Education
Christa Saas - German
Joel Sadavoy - Medical Science
Ann Saddlemeyer - English
Paul Sadowski - Molecular Genetics
Albert Safarian - Management
Linda Safran - Art
Rowan Sage - Ecology & Evolutionary Biology
Tammy Sage - Ecology & Evolutionary Biology
Mohini Sain - Forestry
Jean Saint-Cyr - Medical Science
Atsuko Sakaki - East Asian Studies
Isaac Sakinofsky - Public Health Sciences
Alan Sak - Management
Janet Salaff - Sociology
Andre Salama - Electrical & Computer Engineering
Wald Saleh - Religion
Sara Salih - English
Irving Salit - Medical Science
Michael Salter - Physiology
Robert Salter - Medical Science
William Samarin - Anthropology
Stella Sandahl - East Asian Studies
Richard Sandbrook - Political Science
Graham Sanders - East Asian Studies
Todd Sanders - Anthropology
Rivanne Sandler - Near & Middle Eastern Civilizations
George Sandor - Dentistry
Ruth Sandwell - Theory & Policy Studies in Education
Annette Sanger - Music
Paul Santerre - Dentistry
Jan Sapp - History & Philosophy of Science & Technology
Rosa Sarabia - Spanish
Edward Sargent - Electrical & Computer Engineering
Blubhendra Sarkan - Biochemistry
Stefan Saroiu - Computer Science
Konstantinos Sarris - Electrical & Computer Engineering
Andrea Sass-Kortsak - Public Health Sciences
Shiho Satsuka - Anthropology
Pierre Savard - Physics
Bradley Saville - Chemical Engineering & Applied Chemistry
Jeannelle Savona - French
Roger Savory - Near & Middle Eastern Civilizations
Lawrence Sawchuk - Anthropology

Peter Sawchuk - Sociology & Equity Studies in Education
John Sawyer - Management
Marlene Scardamalia - Curriculum, Teaching & Learning
Giuseppe Scavizzi - Art
Russell James Schachar - Human Development & Applied Psychology
Harry Schachter - Biochemistry
Joseph Schallert - Slavic
Stephen Schaper - Environment
Edward Schatz - Political Science
Susan Schelle - Art
Glenn Schellenberg - Psychology
Emil Schemitsch - Medical Science
Stephen Scherer - Molecular Genetics
John Scherk - Mathematics
Ulrich Schimmack - Psychology
Aaron Schimmer - Medical Biophysics
Bernard Schimper - Pharmacology & Toxicology
Wayne Schlepp - East Asian Studies
Benjamin Schlesinger - Social Work
Lyanne Schlichter - Physiology
Andre Schmid - East Asian Studies
Lawrence Schmidt - Religion
Emmett Schmitt - English
Mark Schmuckler - Psychology
Bruce Schneider - Psychology
Margaret Schneider - Adult Education & Counselling Psychology
David Schneiderman - Law
Jeremy Schofield - Chemistry
Greg Scholes - Chemistry
James Scholey - Medical Science
monica schraefel - Computer Science
Richard Schreier - Electrical & Computer Engineering
Daniel Schugurensky - Adult Education & Counselling Psychology
Andre Schuh - Medical Science
Daniel Schulze - Geology
Donald Schwartz - Political Science
Walfried Schwerdner - Geology
Ian Scott - Molecular Genetics
Katrena Scott - Human Development & Applied Psychology
Steven Scott - Geology
William Edward Seager - Philosophy
Ernest Seaquist - Astronomy & Astrophysics
Luis Seco - Mathematics
Sonia Sedivy - Philosophy
Adel Sedra - Electrical & Computer Engineering
Mary Seeman - Medical Science
Philip Seeman - Pharmacology & Toxicology
Michael Selton - Chemical Engineering & Applied Chemistry
Dan Segal - Management
Dvora Segal - Chemistry
Harold Segal - Pharmaceutical Sciences
Jacqueline Segall - Biochemistry
Kenneth Selby - Civil Engineering
Paul Selick - Mathematics
Helfried Seliger - German
Daniel Sellen - Anthropology
Edward Sellers - Pharmacology & Toxicology
Ze'ev Seltzer - Dentistry
Adam Semlyen - Electrical & Computer Engineering
John Semple - Medical Science
John Wesley Semple - Pharmacology & Toxicology
Dipak Sen - Mathematics
John Senders - Mechanical & Industrial Engineering
Barry Sesles - Dentistry
Arun Seth - Laboratory Medicine & Pathobiology
Aysan Sev'er - Sociology
Ayelet Shachar - Law
Martha Shaffer - Law
Edward Silva - Sociology
Brian Silverman - Management
Earl Silverman - Immunology
Frances Silverman - Medical Science
Melvin Silverman - Medical Science
Ronald Silvers - Curriculum, Teaching & Learning
Rachel Silvey - Geography
Richard Simeon - Political Science
Katherine Siminovich - Immunology
Louis Siminovich - Molecular Genetics
Craig Simmons - Mechanical & Industrial Engineering
James Simmons - Geography
Roger Simon - Sociology & Equity Studies in Education
Andre Simpson - Chemistry
John Simpson - Sociology
Myrna Simpson - Geography
Anthony Sinclair - Mechanical & Industrial Engineering
Peikka Sinervo - Physics
Peter Singer - Medical Science
Karan Singh - Computer Science
Eric Single - Sociology
Robert Sinkewicz - Medieval Studies
Aloysius Siow - Economics
John Sipe - Physics
Jean Sislian - Aerospace Science & Engineering
Chi-Hung Siu - Biochemistry
Frances Skinner - Physiology
Harvey Skinner - Public Health Sciences
Grace Skogstad - Political Science
Michael Skolnik - Theory & Policy Studies in Education
Raymond Skyme - Spanish
Brent Sleep - Civil Engineering
Gordon Siemon - Electrical & Computer Engineering
James Slotta - Curriculum, Teaching & Learning
Arthur Slutsky - Medical Science
Michael Smart - Economics
Craig Smibert - Biochemistry
Waldemar Smieliauskas - Management
Alison Smith - History
Brian Cantwell Smith - Information Studies
C.Tattersall Smith - Forestry
David Smith - Anthropology
David Smith - French
Myrna Simpson - Geography
Aloysius Siow - Economics
J.J. Berry Smith - Cell & Systems Biology
James Smith - Chemical Engineering & Applied Chemistry
Kenneth Smith - Electrical & Computer Engineering
Marilym Smith - Psychology
Mary Louise Smith - Psychology
Peter Smith - Electrical & Computer Engineering
Sandy Smith - Forestry
Stuart Smith - Mathematics
Denis Smyth - History
Elizabeth Smyth - Curriculum, Teaching & Learning
Ronald Smyth - Linguistics
Carter Sneed III - Medical Science
Jordan Sobel - Philosophy
Richard Soberman - Civil Engineering
Philip Sohm - Art
Marla Sokolowski - Ecology & Evolutionary Biology
Stefan Soldovieri - German
### Graduate Faculty

<table>
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<th>Department</th>
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<td>Michael Sole</td>
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<td>Samuel Solecki</td>
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<td>Peter Solomon</td>
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<td>Luca Somigil</td>
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<td>Iain Sommerville</td>
<td>Materials Science &amp; Engineering</td>
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<td>Edmund Sullivan</td>
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<td>L Wayne Sumner</td>
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<td>Yu Sun</td>
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<td>Merrill Swain</td>
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<td>Carol Swallow</td>
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<td>Ronald Sweet</td>
<td>Near &amp; Middle Eastern Civilizations</td>
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<tr>
<td>Neil Sweezey</td>
<td>Medical Science</td>
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<td>Heather Sykes</td>
<td>Curriculum, Teaching &amp; Learning</td>
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<td>Balazs Szegedy</td>
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<td>Jennifer Tackett</td>
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<tr>
<td>Anna Taddio</td>
<td>Pharmaceutical Sciences</td>
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<tr>
<td>Romin Tafarodi</td>
<td>Psychology</td>
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<tr>
<td>Salil Tagliamonte</td>
<td>Linguistics</td>
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<tr>
<td>Chetan Kumar Tailor</td>
<td>Molecular Genetics</td>
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<tr>
<td>Kimberly Tail</td>
<td>Geology</td>
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<tr>
<td>Franklin Tall</td>
<td>Mathematics</td>
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<tr>
<td>Ashwini Tambe</td>
<td>Women &amp; Gender Studies</td>
</tr>
<tr>
<td>Julian Tanner</td>
<td>Sociology</td>
</tr>
</tbody>
</table>
Graduate Faculty

Full Members and Members Emeriti

Ian Tannock - Health Policy, Management & Evaluation
Rosemary Tannock - Human Development & Applied Psychology
Stephen Tannock - Mathematics
Alan Tanswell - Medical Science
Valerie Tarasuk - Nutritional Sciences
Susan Tarlo - Medical Science
Maxim Tarnawsky - Slavic
Charles Tator - Medical Science
Mohamad Tavakoli-Targhi - Near & Middle Eastern Civilizations
Glen Taylor - Religion
Ian Taylor - Anatomy & Cell Biology
Judith Taylor - Sociology
Margot Taylor - Medical Science
Michael Taylor - Laboratory Medicine & Pathobiology
Robert Taylor - French
Alexie Tcheuyap - French
Lyne Teather - Museum Studies
Judith Ann Teichman - Political Science
Raymond Tellier - Laboratory Medicine & Pathobiology
Douglas Templeton - Laboratory Medicine & Pathobiology
Neil Ten Kortenaar - English
Howard Tenenbaum - Dentistry
Sergio Tenenbaum - Philosophy
Roderick Tennyson - Aerospace Science & Engineering
Ulrich Tepass - Cell & Systems Biology
Lorne Tepperman - Sociology
Nicholas Terpstra - History
Richard Teuscher - Physics
Dennis Thiessen - Curriculum, Teaching & Learning
Alan Thomas - Adult Education & Counselling Psychology
Scott Thomas - Exercise Sciences
Sean Thomas - Forestry
Christopher Thompson - Theoretical Astrophysics
Evan Thompson - Philosophy
Lilian Thompson - Nutritional Sciences
Margaret Thompson - Molecular Genetics
Michael Thompson - Chemistry
Paul Thompson - History & Philosophy of Science & Technology
William Thompson - Psychology
H. Leslie Thomson - English
James Thomson - Ecology & Evolutionary Biology
Murray Thomson - Mechanical & Industrial Engineering
Roger Thomson - Slavic
Paul Thorner - Laboratory Medicine & Pathobiology
Steven Thorpe - Materials Science & Engineering
Joseph Thywissen - Physics
Thomas Tidwell - Chemistry
Mary Tierney - Medical Science
James Till - Medical Biophysics
Elizabeth Tillier - Medical Biophysics
Victor Timmer - Forestry
John Timusk - Civil Engineering
Tanya Titchkosky - Sociology & Equity Studies in Education
Teresa To - Public Health Sciences
Stephen Tobe - Cell & Systems Biology
Joanne Tod - Art

Barbara Todd - History
Stevo Todorcevic - Mathematics
Cameron Tolton - French
Mihkel Tombik - Management
Kim Tomczak - Art
Denise Tomkins - Pharmacology & Toxicology
George Tomlinson - Public Health Sciences
Brenda Toner - Medical Science
Sam Toueg - Computer Science
Ann Tourangeau - Nursing Science
David Robert Townsend - Medieval Studies
Richard Townsend - Theory & Policy Studies in Education
John Trachtenberg - Medical Science
John Traill - Classics
Honghi Tran - Chemical Engineering & Applied Chemistry
Nhung Tran - History
Olev Trass - Chemical Engineering & Applied Chemistry
Ross Traub - Curriculum, Teaching & Learning
Michael Trebilcock - Law
Daniel Treffer - Management
Sandra Trehub - Psychology
Luc Tremblay - Exercise Sciences
Peter Trifonas - Curriculum, Teaching & Learning
William Trimble - Biochemistry
William Trischuk - Physics
David Tritchler - Medical Biophysics
Nicolas Trocme - Social Work
Tamara Trojanowska - Slavic
Graham Trope - Medical Science
Vince Tropepe - Cell & Systems Biology
Harold Troper - Theory & Policy Studies in Education
Alissa Trotz - Sociology & Equity Studies in Education
Kien (Kevin) Truong - Electrical & Computer Engineering
Ka Tat Tsang - Social Work
Ming-Sound Tsao - Laboratory Medicine & Pathobiology
Florence Tsui - Immunology
Reiko Tsukimura - East Asian Studies
Robert Tsushima - Physiology
Jack Ven Tu - Health Policy, Management & Evaluation
Endel Tulving - Psychology
Carolyn Tuohy - Political Science
Ismail Turksen - Mechanical & Industrial Engineering
David Turner - Anthropology
Francis Turner - Social Work
Matthew Turner - Economics
Douglas Tweed - Physiology
Michael Tyers - Molecular Genetics
Michael Tymianski - Physiology
Rachel Tyndale - Pharmacology & Toxicology

U

Jack Uetrecht - Pharmaceutical Sciences
Sheldon Ungar - Sociology
Ross Edward Upshur - Medical Science
David Urbach - Medical Science
Murray Urowitz - Medical Science
Alasdair Urrahart - Philosophy
Torstein Utigard - Materials Science & Engineering
Shuzo Uyenaka - East Asian Studies
Graduate Faculty

V
Leif Vaage - Religion
Franco Vaccarino - Psychology
Mary Vachon - Public Health Sciences
Borje Vahamaki - Slavic
Shahrokh Valaee - Electrical & Computer Engineering
Catherine Valcke - Law
Mary Vachon - Public Health Sciences
John Philip Valleau - Chemistry
Mariana Valverde - Criminology
Johannes Van Biesbroeck - Economics
John Van De Vege - Mechanical & Industrial Engineering
Derek Van Der Kooy - Molecular Genetics
Emilie Van Deventer - Electrical & Computer Engineering
Henry Van Driel - Physics
Blanche van Ginkel - Architecture, Landscape, & Design
Marten van Kerkwijk - Astronomy & Astrophysics
Sylvia Van Kirk - History
Pascal van Lieshout - Speech-Language Pathology
willem Vanderburg - Civil Engineering
Rosamond Vanderburgh - Anthropology
Greg Vanlabeberhe - Cell & Systems Biology
Susannah Varmuza - Cell & Systems Biology
Eugene Vayda - Health Policy, Management & Evaluation
Frank Vecchio - Civil Engineering
Andreas Veneris - Electrical & Computer Engineering
Anastasios Venetsanopoulos - Electrical & Computer Engineering
Ronald Venter - Mechanical & Industrial Engineering
Nicolaas Verhoef - Medical Science
Anil Verma - Management
Mary (Molly) Verrier - Physical Therapy
Joseph Michael Vertin - Religion
Jack Veugelers - Sociology
Maria Vicedo Castello - History & Philosophy of Science & Technology
Joaquim Jose Vicente - Mechanical & Industrial Engineering
Reinhold Vieth - Laboratory Medicine & Pathobiology
John Vincent - Medical Science
Lynne Viola - History
Robert Vipond - Political Science
Balint Virag - Statistics
Colin Visser - English
Alex Vitkin - Medical Biophysics
Sorin Voinigescu - Electrical & Computer Engineering
Allen Volchuk - Biochemistry
Richard Volpe - Human Development & Applied Psychology
Peter Von Bitter - Geology
Zvonko Vranesic - Electrical & Computer Engineering
Milad Vranic - Physiology
Vladimir Vuskans - Nutritional Sciences

W
Stephen Waddams - Law
Thomas Waddell - Medical Science
Narendra Wagle - History
Helene Wagner - Ecology & Evolutionary Biology
Merlin Walsstrom - Curriculum, Teaching & Learning
Sarah Wakefield - Geography
Rinaldo Walcott - Sociology & Equity Studies in Education
Robert Wald - Medical Science
Paul Walfish - Medical Science
Gilbert Walker - Pharmacy
John Walker - French
Kaley Walker - Physics
Michael Walker - Physics
Scott Walker - Pharmaceutical Sciences
Alan Walks - Geography
James Wallace - Mechanical & Industrial Engineering
John Wallace - Curriculum, Teaching & Learning
Malcolm Wallace - Classics
Faith Wallis - History & Philosophy of Science & Technology
Denis Walsh - Philosophy
Cameron Walter - Music
Njoki Wane - Sociology & Equity Studies in Education
Chen Wang - Laboratory Medicine & Pathobiology
Elaine Wang - Health Policy, Management & Evaluation
Lu-Yang Wang - Physiology
Paul Wang - Biomedical Engineering
Qing (Kevin) Wang - Management
Qinghua Wang - Physiology
Zhirui Wang - Materials Science & Engineering
Frank Wania - Chemistry
Charles Ward - Mechanical & Industrial Engineering
Michael Ward - Medical Science
Wendy Ward - Nutritional Sciences
Padraigh Warde - Medical Science
Holly Wardlow - Anthropology
Wesley War - History
Germaine Warrentin - English
Jerry Warsh - Medical Science
Donald Waselenki - Health Policy, Management & Evaluation
David Waterhouse - East Asian Studies
Melville Watkins - Political Science
Andrew Watson - Economics
Jeanne Watson - Adult Education & Counselling
Psychology
Philip Watson - Dentistry
Tania Watts - Immunology
Judith Watt-Watson - Nursing Science
Michael Wayne - History
Jill Webster - Spanish
John Wedge - Medical Science
Jason Wei - Management
John Wei - Physics
Ernest Weinrib - Law
Lorraine Weinrib - Law
Arthur Weis - Ecology & Evolutionary Biology
Richard Weis - Medical Science
Karen Weisman - English
William Weiss - Mathematics
Rosanna Weksberg - Medical Science
David Welch - Political Science
Barry Wellman - Sociology
James Wells - Pharmaceutical Sciences
Lilian Wells - Social Work
Mathew Wells - Geography
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<td>Karen Yoshida</td>
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<td>Full Members and Members Emeriti</td>
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Graduate Faculty

Keiko Yoshioka - Cell & Systems Biology
Lidan You - Mechanical & Industrial Engineering
Kue Young - Public Health Sciences
Lionel Trevor Young - Health Policy, Management & Evaluation
R. Paul Young - Civil Engineering
John Youson - Cell & Systems Biology
Eric Yu - Information Studies
Wei Yu - Electrical & Computer Engineering
Xian-Min Yu - Dentistry
Yeni Yucel - Laboratory Medicine & Pathobiology
Andrei Yudin - Chemistry

Z
Eldad Zacksenhaus - Medical Biophysics
David Zakus - Nursing Science
Safwat Zaky - Electrical & Computer Engineering
Konstantine Zakzanis - Psychology
Deborah Zamble - Chemistry
Peter Zandstra - Biomedical Engineering
Brent Zanke - Medical Science
George Zarb - Dentistry
Robert Zee - Aerospace Science & Engineering
Irving Zeitlin - Sociology
Philip Zelazo - Psychology
Suzanne Zeller - History & Philosophy of Science & Technology
Richard Zemel - Computer Science
Haibo Zhang - Medical Science
Li Zhang - Laboratory Medicine & Pathobiology
Liang Zhang - Medical Science
Ping Zhang - Management
Zhaolei Zhang - Molecular Genetics
Mei Zhen - Molecular Genetics
Gang Zheng - Medical Biophysics
Jianwen Zhu - Electrical & Computer Engineering
Xiaodong Zhu - Economics
Min Zhuo - Physiology
Maria Zielenksa - Laboratory Medicine & Pathobiology
John Zilcosky - German
Ann Zimmerman - Ecology & Evolutionary Biology
David Zingg - Aerospace Science & Engineering
Bernard Zinman - Medical Science
Robert Zipursky - Medical Science
Stanley Zlotkin - Nutritional Sciences
Ron Zohar - Dentistry
Jean Zu - Mechanical & Industrial Engineering
Ezra Zubrow - Anthropology
Kenneth Zucker - Psychology
Marvin Zucker - Theory & Policy Studies in Education
Stefan Zukotynski - Electrical & Computer Engineering
Juan Carlos Zuniga-Pflucker - Immunology
David Zweig - Industrial Relations & Human Resources
Graduate Programs

This section contains a listing of graduate programs offered by the School of Graduate Studies at the University of Toronto. It is divided into three categories, by program type:
1. Degree programs
2. Collaborative programs
3. Joint programs

SGS comprises over 80 graduate units (departments, centres, and institutes), over 35 collaborative (interdisciplinary) programs, and 3 joint programs.

Within each program type, graduate units are listed alphabetically with a descriptive overview, contact information, a list of degree programs offered, together with admission and program requirements and courses. The calendar entry concludes with a list of graduate faculty appointed to the graduate unit.

For further details about a program, visit the graduate unit's Web site, listed in the contact information.
Adult Education and Counselling Psychology  AEC

Faculty Affiliation
Ontario Institute for Studies in Education

Degree Programs Offered
Adult Education and Community Development
– MA, MEd, PhD

Counselling Psychology:
  Counselling Psychology for Psychology Specialists
  – MA, PhD
  Counselling Psychology for Community Settings
  – MEd, EdD
  Guidance and Counselling for Schools
  – MEd

Collaborative Programs Offered
  Degree programs that participate in:
  1. Aboriginal Health, see p. 404
     • Adult Education and Community Development, MA, PhD
     • Counselling Psychology, MA, PhD
  2. Addiction Studies, see p. 406
     • Counselling Psychology, MA, PhD
  3. Aging, Palliative and Supportive Care Across the Life Course, see p. 408
     • Adult Education and Community Development, MA, MEd, PhD
     • Counselling Psychology, MA, MEd, EdD, PhD
  4. Community Development, see p. 428
     • Adult Education and Community Development, MA, MEd
     • Counselling Psychology, MA, MEd
  5. Comparative, International and Development Education, see p. 430
     • Adult Education and Community Development, MA, MEd
  6. Environmental Studies, see p. 443
     • Adult Education and Community Development, MA, MEd, PhD
     • Counselling Psychology, MA, MEd, EdD, PhD
  7. Women and Gender Studies, see p. 473
     • Adult Education and Community Development, MA, MEd, PhD

Overview
  The Department of Adult Education and Counselling Psychology is the second largest of the five departments within the Ontario Institute for Studies in Education OISE and offers a full range of graduate degrees - Master of Arts, Master of Education, Doctor of Education, and Doctor of Philosophy - in each of two major programs:
  1. Adult Education and Community Development
  2. Counselling Psychology
  The Adult Education and Community Development (AECD) program provides a place to study and contribute to theory, practice, and policy concerning adult learning in organizations, communities, workplaces, and social movements in local, national, and international contexts. We are an interdisciplinary program which highlights critical social analysis, transformative learning, creative inquiry, and international/global awareness. Perspectives represented in the program include: aboriginal/indigenous; anti-racist/anti-colonial; feminist; environmental/ecological; socialist/Marxist.
  The Adult Education and Community Development program faculty are grouped into four areas of emphasis:
  1. Aboriginal/Indigenous Education
  2. Workplace Learning and Change
  3. Creative Inquiry, Personal and Professional Learning
  The Counselling Psychology program is designed to provide critical and scholarly skills in counselling and counsellor education and to train counsellors and psychologists in the general domain of human services. The Counselling Psychology program offers three fields of specialization:
  1. Counselling Psychology for Psychology Specialists (MA, PhD)
  2. Counselling Psychology for Community Settings (MEd, EdD)
  3. Guidance and Counselling for Schools (MEd)

Contact and Address
Admission
  For application information and forms, visit the Registrar's Office Web site: www.ro.oise.utoronto.ca
  E-mail: gradstudy@oise.utoronto.ca
  Telephone: (416) 978-1682
  The Ontario Institute for Studies in Education (OISE)
  University of Toronto
  Registrar's Office
  Graduate Studies, Admissions Unit
  Fourth Floor, 252 Bloor Street West
  Toronto, Ontario  M5S 1V6
  Canada
  Admission enquiries should be made well in advance of the regular deadline for receipt of applications. Given the limited number of students the Department may accept into the majority of its programs, not all eligible applicants will be admitted.
  For further application information, contact:
  E-mail: gradstudy@oise.utoronto.ca
  Telephone: 416-978-1682
  Graduate Studies Admissions Unit
  Room 4-485

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Degree Programs

Adult Education and Community Development

Master of Arts
The MA is a research-based degree and can be taken on a full-time or part-time basis. During their program of study, MA students are expected to have exposure to both qualitative and quantitative approaches to research.

Minimum Admission Requirements
- A four-year University of Toronto bachelor’s degree in a relevant discipline or professional program with a grade of B+ or better in the final year, or its equivalent from a recognized university.

Program Requirements
- 4.0 full-course equivalents (FCE) plus a thesis based on original research.
- The program normally requires more than one year.
- Course work taken is mainly at the 1000 level, of which at least 2.0 FCE must be from the Adult Education and Community Development program. Additional courses may be required of some students. Students must take AEC 1100H Outline of Adult Education and AEC 1183H Master’s Thesis Seminar. 0.5 FCE in research methods is required.
- MA students complete a thesis which may lay the groundwork for doctoral research.

Master of Education
The MEd is a non-thesis degree program which can be taken on either a full-time or part-time basis.

Minimum Admission Requirements
- A four-year University of Toronto bachelor’s degree in a relevant discipline or professional program with a grade of mid-B or better in the final year, or its equivalent from a recognized university.

Program Requirements
- Normally 5.0 full-course equivalents (FCE), usually at the 1000 level. At least half of the courses must be from the Adult Education and Community Development program. Students are required to take course AEC 1100H Outline of Adult Education as well as one research methods course.

Doctor of Philosophy
The PhD degree program is 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 Adult Education and Community Development program offers both a full-time and flexible-time PhD. Full-time PhD students must complete their degree within six years; flexible-time PhD students must complete their degree within eight years.

Minimum Admission Requirements
- A University of Toronto MA in Education, or its equivalent from a recognized university, in the same field of specialization at the doctoral level.
- A standing equivalent to a University of Toronto B+ or better in master’s courses.

Program Requirements
- Full-time and flexible time PhD students begin as a cohort. Except for the time to completion, requirements for both programs are the same.
- It is recommended that students take course AEC 3102H Doctoral Thesis Course in Adult Education in the first session of their program.
- All students must complete 3.0 full-course equivalents (FCE), of which at least 2.0 FCE must be from the Adult Education and Community Development program. Students with little background in the field of Adult Education and Community Development will be required to do an additional 0.5 FCE providing such background. A minimum of 2.0 FCE must be at the doctoral/3000 level, normally including course AEC 3102H. Students also normally take at least 0.5 FCE specialized research methods course.
- All students are expected to complete a comprehensive requirement and a thesis.

Courses
Not all courses are given each year. Please consult the course schedules available from the Registrar’s Office.

AEC 1100H Outline of Adult Education
AEC 1101H Program Planning in Adult Education
AEC 1102H Community Development: Innovative Models
AEC 1103H Introduction to Research Methods in Adult Education
AEC 1104H Community Education and Organizing
### Degree Programs

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>AEC 1107H</td>
<td>Developing and Leading High Performing Teams: Theory and Practice</td>
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<td>AEC 1108H</td>
<td>Adult Learning (Credit/No Credit)</td>
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<td>AEC 1110H</td>
<td>Basic Processes in Teaching Adults</td>
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<td>AEC 1113H</td>
<td>Gender and Hierarchy at Work</td>
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<td>AEC 1114H</td>
<td>Comparative and International Perspectives in Adult Education</td>
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<td>AEC 1117H</td>
<td>Consulting Skills for Adult Educators</td>
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<td>AEC 1119H</td>
<td>Creating a Learning Organization</td>
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<td>AEC 1122H</td>
<td>Practicum in Adult Education and Community Development (Credit/No Credit)</td>
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<td>AEC 1125H</td>
<td>Contemporary Issues in Adult Literacy</td>
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<td>AEC 1131H</td>
<td>Special Topics in Adult Education (Master’s)</td>
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<td>Organizations and the Adult Educator: Historical and Theoretical Perspectives on Organization Development</td>
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<td>Introduction to Feminist Perspectives on Society and Education</td>
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<td>Participatory Research in the Community and the Workplace</td>
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<td>Women, War, and Learning</td>
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<td>An Introduction to Workplace, Organizational, and Economic Democracy</td>
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<td>AEC 1150H</td>
<td>Critical Perspectives on Organizational Theory, Development and Practice</td>
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<td>Individual Reading and Research in Adult Education: Master’s Level</td>
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<td>Power and Difference in the Workplace</td>
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<td>Poetry, Social Movements, and Adult Learning</td>
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<td>Practitioners’ Experienced Knowledge</td>
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<td>Treaty Rights and Aboriginal Education: Contemporary Policies and Programs</td>
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<td>Creativity and Wellness: Learning to Thrive</td>
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<td>Practitioner/Ecological Identity and Reflective Inquiry</td>
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<td>Aboriginal World Views: Implications for Education</td>
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<td>AEC 1182H</td>
<td>Teaching, Learning and Working in Non-profit and Public Sector Organizations</td>
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<td>AEC 1187H</td>
<td>Alternative Ways of Researching Aging, Illness and Health</td>
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<td>AEC 3102H+</td>
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<td>Global Perspectives on Feminist Education, Community Development, and Community Transformation</td>
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<td>Transformative Education and the Global Community: Creativity and Social Change</td>
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<tr>
<td>AEC 3176H</td>
<td>Sense of Place in Professional and Natural Contexts</td>
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<tr>
<td>AEC 3177H</td>
<td>Arts-InforMEd Perspectives in Educational Research</td>
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<tr>
<td>AEC 3179H</td>
<td>Work, Technology and the Knowledge Economy</td>
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<tr>
<td>AEC 3180H</td>
<td>Global Governance and Educational Change: the Politics of International Studies</td>
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<tr>
<td>AEC 3181H</td>
<td>Feminist Standpoints: Critical and Post-Structural Approaches</td>
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<tr>
<td>AEC 3182H</td>
<td>Citizenship Learning and Participatory Democracy</td>
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<tr>
<td>AEC 3183H</td>
<td>Mapping Social and Organizational Relations in Adult Education</td>
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<tr>
<td>CIE 1001H</td>
<td>Introduction to Comparative, International and Development Education</td>
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<tr>
<td>CIE 1002H</td>
<td>Practicum in Comparative, International and Development Education</td>
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</tbody>
</table>

### Interprogram Courses

- **AEC 1400H** Special Topics in Adult Education and Counselling Psychology
- **AEC 1405H** Introduction to Qualitative Research: Part I
- **AEC 1406H** Introduction to Qualitative Research: Part II
- **AEC 1408H** Working with Survivors of Trauma
- **AEC 1409H** Creative Empowerment Work with the Disenfranchised
- **SES 1925H** Indigenous Knowledge and Decolonization: Pedagogical Implications
- **SES 2942H** Education and Work

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*+Extended course. For academic reasons, course work is extended into session following academic session in which course is offered.*
Counselling Psychology

Counselling Psychology for Psychology Specialists

Master of Arts

This MA program is designed for applicants interested in working as researchers or practitioners in a variety of psychological and educational settings. The program meets the basic academic and clinical requirements for registration with the College of Psychologists of Ontario as a Psychological Associate. It also meets the needs of students who plan to apply to the PhD program in Counselling Psychology for Psychology Specialists.

Minimum Admission Requirements

• A four-year University of Toronto bachelor's degree in psychology or any four-year undergraduate degree which would contain the psychology requirement equivalent (defined as 6.0 full-course equivalents (FCE) in psychology, including 0.5 FCE in research methods, 0.5 FCE in statistics and at least 3.0 FCE at the third- and fourth-year level).
• A standing equivalent to a University of Toronto A- better in the final year.

Program Requirements

• The MA in Counselling Psychology for Psychology Specialists consists of 4.0 full-course equivalents (FCE)
• 500 hours of practicum
• A master's thesis
• Every program of study includes courses in counseling theory, practice, assessment, ethics, personality and cognitive assessment skills, and research methodology, as well as a practicum placement.
• Full-time on-campus study is required from September to April, which represents the Fall and Winter Sessions; however, students may begin their program of study in the preceding Summer Session. Normally, 1.5 FCE are taken in each of the Fall and Winter Sessions and a maximum of 1.0 FCE in the Summer Session.
• It is expected that all degree requirements will be completed within two years.

Doctor of Philosophy

The principal emphasis of this degree program is the development of research and theoretical knowledge in counselling psychology, assessment skills, and knowledge and training in professional issues. Students are expected to conduct advanced research and to develop professional knowledge and skills in counselling psychology. Graduates will be prepared to assume a variety of positions in psychological practice and research in schools and universities, in community settings, in agencies offering psychological services, and in university or college counselling centres. The program of study must be taken on a full-time basis and progress in the program will be reviewed annually. Please note that the Counselling Program is currently adjusting course requirements to conform to the guidelines and principles for the Canadian Psychological Association accreditation of programs in professional psychology.

Minimum Admission Requirements

• Students may be admitted to the PhD program via one of two routes:
  o from a bachelor's degree: a four-year University of Toronto bachelor’s degree in psychology or any four-year undergraduate degree which would contain the psychology requirement equivalent (defined as 6.0 FCE in psychology, including 0.5 FCE in research methods, 0.5 FCE in statistics, and at least 3.0 FCE at the third- and fourth-year level). A standing equivalent to a University of Toronto A- better in the final year.
  o from a master's degree: a University of Toronto M.A. degree with specialization in Counselling Psychology for Psychology Specialists with a grade of A- or better, or its equivalent.

Program Requirements

• The PhD program requires a minimum of 5.0 full-course equivalents (FCE) (including practicum AEC 3217Y and internship AEC 3268Y).
• Practicum. Complete a 500-hour practicum in conjunction with the doctoral practicum course AEC 3217Y
• Internship (AEC 3268Y). 2,000 hours of internship. All internship arrangements must be made in consultation with the Coordinator of Internship and Counselling Services.
• Comprehensive examination. Students will be examined systematically in general psychology and in professional psychology.
• Doctoral dissertation. All students must develop, complete, and defend in an oral examination, a doctoral dissertation supervised by a full-time member of the Counselling Psychology faculty. The content of such dissertation research may address theoretical issues applicable to 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 counselling psychology.
Counselling Psychology for Community Settings

Master of Education

This degree program provides individuals with the opportunity to learn and develop counselling skills appropriate for a variety of work settings. Students are encouraged to develop their courses and practicum learning experiences to suit their own goals. Examples of the types of goals for which suitable programs of study could be developed are adult counselling, college and university counselling centres, career counselling, geriatrics counselling, multicultural counselling, and community mental health and family life centres. The program of study provides students with the basic preparation for certification as a Certified Canadian Counsellor (CCC) with the Canadian Counselling Association (CCA).

Minimum Admission Requirements

- A four-year University of Toronto bachelor’s degree-of any background or discipline—with a grade of B+ or better in the final year, or its equivalent from a recognized university.
- At least one year of relevant experience.

Program Requirements

- The MEd in Counselling Psychology for Community and Educational Settings requires 5.0 full-course equivalents (FCE) plus a comprehensive examination.
- The 3.0 FCE required in Counselling Psychology include courses in counselling, group theory, ethics, and a practicum.
- Arrangements regarding a practicum placement must be made in consultation with the Coordinator of Internship and Counselling Services. MEd students can also pursue research in the area of Work and Career which is offered jointly by the Counselling Psychology program and the Adult Education and Community Development program.

Doctor of Education

Counsellor training in this degree program emphasizes the role of the counsellor in the educational system, the acquisition of effective supervisory and consultative skills, and the development and assessment of student counselling services in addition to the advanced study of counselling theory and practice. Graduates will be prepared to take leadership positions in the field of educational counselling; 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 personnel; and as providers of advanced levels of personal counselling to school, college, and related populations.

This option will be especially attractive to individuals who have demonstrated a career commitment to the provision of counselling services in an educational and community setting.

Minimum Admission Requirements

- Students may be admitted to the PhD program via one of two routes:
  - from a bachelor’s degree: A four-year University of Toronto bachelor’s degree—of any background or discipline—of any background or discipline—or its equivalent from a recognized university
  - from a master’s degree: An MA or MEd degree in Counselling 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 as a counsellor in an educational setting or in a related position. Applicants who hold an MEd or other non-thesis master’s degree must submit evidence of their ability to identify a research or development problem, to design and conduct a study or project, and to report the findings or results, all in a rigorous manner. This constitutes a Qualifying Research Paper (QRP).

Program Requirements

- All students are required to take courses related to the development of competence in counselling theory and practice and to the development of research skills.
- The EdD program requires a minimum of 4.5 full-course equivalents (FCE) (including practicum and internship) and a doctoral dissertation.
- 3.5 of the 4.5 FCE must be in Counselling Psychology.
- Each student must complete a minimum of one year of full-time, on-campus study.
- Practicum. Complete a 500-hour practicum in conjunction with the doctoral practicum course AEC 3217Y.
- Internship (AEC 3270H). Complete 500 hours of internship. All internship arrangements must be made in consultation with the Coordinator of Internship and Counselling Services.
- Thesis. All students must develop, complete, and defend in an oral examination, a doctoral dissertation. The content of such dissertation research may address theoretical issues applicable to 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 counselling psychology.
Degree Programs

Guidance and Counselling for Schools

Master of Education

This degree program helps meet the need for well-prepared practitioners in the field of guidance and counselling in the schools. Therefore, strong preference for admission to this degree program 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 Association (CCA). Students completing this MEd program may have their degree credited toward Parts I and II of the Ontario College of Teachers’ (OCT) Specialist Certificate in Guidance. Students may pursue the MEd degree on a full-time or part-time basis.

Minimum Admission Requirements

• An appropriate four-year University of Toronto bachelor's degree with a grade of B+ or better in the final year, or its equivalent from a recognized university.
• Teacher certification.

Program Requirements

• 5.0 full-course equivalents (FCE) plus a comprehensive examination.
• The program of study, planned by the student in consultation with the faculty advisor, cannot be reduced because of guidance certificates held. Within the 3.0 FCE required in Counselling Psychology, every program of study must include counselling and group theory and a practicum experience.

Courses

Not all courses are given each year. Please consult the course schedules available from the Registrar’s Office.

AEC 1202H Theories and Techniques of Counselling
AEC 1203Y+ Practicum in Counselling
AEC 1207H Counselling Topics in Sexual Orientation and Gender Identity Diversity
AEC 1214H Critical Multicultural Practice: Diversity Issues in Counselling
AEC 1219H Ethical Issues in Professional Practice in Psychology
AEC 1228H Individual and Group Psychotherapy: Family and Marital Counselling
AEC 1229H Individual and Group Psychotherapy for Counselling
AEC 1245H Brief Counselling Strategies
AEC 1247H Practicum in Adult Counselling
AEC 1252H Individual Reading and Research in Counselling Psychology: Master’s Level
AEC 1253H Feminist Issues in Counselling Psychology and Psychotherapy
AEC 1261H Group Work in Counselling
AEC 1262H Educational and Psychological Testing for Counselling
AEC 1263H Seminar in Research Methods for MA Students
AEC 1266H Career Counselling and Development: Transition from School to Work
AEC 1267Y Advanced Practicum in Counselling
AEC 1268H Career Counselling and Development: Transitions in Adulthood
AEC 1269H Use of Guided Imagery in Counselling and Psychotherapy
AEC 1273H+ Special Topics in Counselling Psychology (Master’s)
AEC 1278H Cognitive Therapy
AEC 1289H Community Mental Health
AEC 3211H Counselling and Researching in Context: Critical Perspectives on Counselling and Health Promotion Research
AEC 3215H Seminar in Counselling Psychology: Part I
AEC 3216H Seminar in Counselling Psychology: Part II
AEC 3217Y+ Practicum in Counselling Psychology
AEC 3224H Individual Cognitive and Personality Assessment
AEC 3225H Assessment and Diagnosis of Personality and Psychopathology
AEC 3253H Individual Reading and Research in Counselling Psychology: Doctoral Level
AEC 3260H Psychopathology and Diagnosis
AEC 3267Y PhD Internship
AEC 3275H Special Topics in Counselling Psychology (Master’s)
AEC 3289H Community Mental Health
AEC 1400H Special Topics in Adult Education and Counselling Psychology
AEC 1405H Introduction to Qualitative Research: Part I
AEC 1406H Introduction to Qualitative Research: Part II
AEC 1408H Working with Survivors of Trauma
AEC 1409H Creative Empowerment Work with the Disenfranchised
HDP 1223H Depression in the Schools: Assessment, Prevention, and Intervention
HDP 3204H Contemporary History and Systems in Human Development and Applied Psychology

+AEC 1173H Creativity and Wellness: Learning to Thrive
AEC 3173H Effecting Change: Creating Wellness
AEC 1400H Special Topics in Adult Education and Counselling Psychology
AEC 1405H Introduction to Qualitative Research: Part I
AEC 1406H Introduction to Qualitative Research: Part II
AEC 1408H Working with Survivors of Trauma
AEC 1409H Creative Empowerment Work with the Disenfranchised
HDP 1223H Depression in the Schools: Assessment, Prevention, and Intervention
HDP 3204H Contemporary History and Systems in Human Development and Applied Psychology

Interprogram Courses

The following courses are accepted for credit in the Counselling Psychology program and will satisfy that program’s specialization requirements. For descriptions, see the relevant programs.

AEC 1173H Creativity and Wellness: Learning to Thrive
AEC 3173H Effecting Change: Creating Wellness
AEC 1400H Special Topics in Adult Education and Counselling Psychology
AEC 1405H Introduction to Qualitative Research: Part I
AEC 1406H Introduction to Qualitative Research: Part II
AEC 1408H Working with Survivors of Trauma
AEC 1409H Creative Empowerment Work with the Disenfranchised
HDP 1223H Depression in the Schools: Assessment, Prevention, and Intervention
HDP 3204H Contemporary History and Systems in Human Development and Applied Psychology

+Extended course. For academic reasons, course work is extended into session following academic session in which course is offered.

Adult Education and Counselling Psychology  83
Graduate Faculty

Full Members
Eileen Antone - BA, BEd, MEd, EdD
Bonnie Burstow - BA, MA, MEd, PhD
Charles Chen - BA, MEd, MA, PhD
Ardra Cole - BA, BEd, MEd, MEd, EdD
Joseph Gillis - BSc, MA, PhD
Mary Alice Guttman - BEd, MSc, PhD
Nancy Jackson - BA, MA, PhD
J Gary Knowles - BA, MS, PhD
Marilyn Laiken - BA, MA, PhD (Chair)
David Livingstone - BA, PhD, CRC
Angela Miles - BA, MA, PhD
Kiran Mirchandani - BA, MA, PhD
Shahrzad Mojab - MEd, PhD
Karen Mundy - BA, MA, PhD, Canada Research Chair
Roxana Ng - BA, MA, PhD
Niva Piran - BA, PhD (Coordinator of Graduate Studies)
Jack Quarter - BA, MA, PhD
Margaret Schneider - BA, MA, PhD
Harry Smaller
Lana Stermac - BSc, MA, PhD
Richard Volpe - BA, MA, PhD
Jeanne Watson - BA, MA, PhD

Members Emeriti
Peter Gamlin - BA, MA, PhD
David Hunt - BS, MA, PhD
Solveiga Miezitis - BA, MA, PhD, CPsych
Edmund Sullivan - PhD
Alan Thomas - BA, MA, PhD

Associate Members
Diane Abbey-Livingston - BA, MEd
Jeffrey Abracen
Olakunle Akingbola - BSc, MSc, MA, PhD, CHRP
Donna Akmam
Anne Archer - BScN, MEd, EdD
Mary Ann Archer
Ann Armstrong
Leena Augimeri
Marie Ann Battiste - BS EdM EdD LLD DH L
Lori Bernstein
Ray Blanchard - BA, MA, PhD
Ana Bodnar
Diana Brecher - BA, MA, EdD
Isa Carmichael - MA, MEd, PhD
Kathryn Church - BA, MA, PhD
Christine Connelly
Christine Courbasson - BA, MA, PhD
David Martin Day - BA, MA, PhD
Diana Denton - BA, MA, PhD
Guy Ewing - AB, BEd, MA, PhD
Margaret Fisher - BA, MEd, EdD
Lawrence Freedman
Brenda Gainer
Anne Goodman - BSc, MEd, PhD

Yasmin Gopal - MA, PhD
Andre Grace - BSc, BEd, MEd, PhD
Denise Grocke - BM, MM, PhD
Zelda Groener
Norman Halpern - PEng, MEd, EdD
Mary Hamilton - BA, PhD
Greg Hamovitch
Femida Handy
Jennifer Horsman - BA, MEd, EdD
Loretta Howard - BSc, MEd, EdD
Michaela Hynie
Ana Isla - BA, MA, PhD
Karin Jasper - MEd, MA, PhD
Liss Jeffrey
Nina Josefowitz - BA, MSc, PhD
N. Jane Knight - BA, MEd, PHD, MPA
Kenneth Kwan - PhD, RMFT, C Psych
Calvin Langton
Laurent Leduc - BA, MA, PhD
Uri Leviatan - BA, MA, PhD
Becky Liddle - BA, MEd, PhD
Rod McCormick - PhD
Maura McIntyre - BA, MEd, EdD
Edward Meade - BA, MEd, EdD
Sam Minsky - BSc, MA, PhD
Roy Moodley - BPhil, MPhil, PhD
Rick Morris
Susan D. Phillips
Jean-Paul Restoule - BA, MA, PhD
Ingrid Richter
Susan Rodger
Judith Silver - BSc, PhD
Patricia Simpson - BA, MEd, PhD
Dalia Slonim - BA, MA, PsyD
Jennifer Stewart - BA, MSc, PhD
John Stewart - BA, BEd, MEd, EdD
Suzanne Stewart
Danilo Streeck
Noreen Stuckless - PhD
Jennifer Sumner - BA, MSc, PhD
Brenda Toner - BA, MA, PhD
Ronald Warner - BA, BEd, MA, EdD
Peter Waterhouse
Seodi Venekai-Rudo White
Robin J Wilson - PhD
Christine Zeuner
Aerospace Science and Engineering  

Degree Programs

Faculty Affiliation
Applied Science and Engineering

Degree Programs Offered
Aerospace Science and Engineering  - MASc, MEng, PhD

Overview
The University of Toronto Institute for Aerospace Studies (UTIAS) offers a complete undergraduate and graduate program in aerospace science and engineering. Since the establishment of UTIAS during the 1940s, the aerospace field has evolved into a multidisciplinary activity that finds itself at the cutting edge of high technology research and development.

The full-time Master of Applied Science program is research oriented and includes a major thesis.

The Master of Engineering program is oriented towards professional engineering practice and consists primarily of course work. It is available on a full-time and part-time basis.

The Doctor of Philosophy program requires advanced graduate research.

Research, categorized into five main areas, apply directly to major scientific and engineering areas of emphasis within the aeronautical and space industry in Canada. Further details appear on the UTIAS Web site.

1. Aircraft Flight Systems: aircraft design, vehicle simulation
2. Aerodynamics, Fluid Dynamics and Propulsion: gasdynamics, aerodynamics, propulsion, computational fluid dynamics
3. Structures and Multidisciplinary Optimization: composite structures and structural analysis
4. Space Systems Engineering: space vehicles, microsatellites, space robotics
5. Engineering Physics: fusion energy

The admission and program information provided here supplements the SGS general and degree regulations. Further details concerning departmental regulations are available in the Graduate Office at UTIAS.

Contact and Address:
Web: www.utias.utoronto.ca
Telephone: (416) 667-7714
Fax: (416) 667-7743

Graduate Department of Aerospace Science and Engineering
Room 169, 4925 Dufferin Street
Toronto, Ontario M3H 5T6
Canada

Degree Programs

Master of Engineering

Minimum Admission Requirements
• Bachelor of Applied Science of this University or an equivalent four-year degree in engineering.

Program Requirements
• 10 courses selected under the guidance of the graduate coordinator or a staff supervisor. Individual programs are arranged to make up for background deficiencies.
• Program may be pursued on a full-time or part-time basis.

Master of Applied Science

Minimum Admission Requirements
• Admitted under the SGS general regulations. Qualified graduates in engineering, mathematics, physics, or chemistry are encouraged to apply. Individual programs are arranged to make up for background deficiencies.

Program Requirements
• Minimum of five courses, one of which must be AER 1800H Research Seminar in Aerospace Science and Engineering. All required courses must be completed during the first year of the program.
• A thesis based on research or development, selected in consultation with the student's supervisor.
• Research performance is assessed by a Research Assessment Committee (RAC), which includes the student's supervisor.
• MASc students are anticipated to complete their degree requirements in 18 months.
• Students interested in pursuing a PhD degree, who have achieved excellent performance in an MASc program at UTIAS, are encouraged to transfer directly into a PhD program, under the same supervisor, at the end of their first year of MASc studies. Approval for transfer is based on the student's research ability, research progress during the first year, and academic standing. Students transferring from an MASc to a PhD program shall be referred to as 'transfer students'.

Doctor of Philosophy

Minimum Admission Requirements
• MASc degree in engineering, mathematics, physics, or chemistry and demonstrated ability to perform advanced research. Applicants with a bachelor's degree who wish to pursue PhD studies at UTIAS will initially be admitted into the MASc program and
Degree Programs

will be considered for direct transfer into the PhD program.

Program Requirements
- Full-time continuous registration for every session, including the summer session, until all degree requirements are completed. PhD students starting with an MASc or MEng degree must spend a minimum of two years in the program. Transfer students spend a minimum of three years in the program from the date of registration in the MASc program.
- Following acceptance into a PhD program, the student shall undertake a program of study under the guidance of a Doctoral Examination Committee (DEC) which includes the student’s supervisor.
- Course work and a thesis which must be based on research conducted while registered for the PhD program. PhD students starting with an MASc or MEng degree require four courses. Transfer students need two courses in addition to the five completed prior to the MASc to PhD transfer for a total of seven courses. All courses must be completed during the first two years in the PhD program.
- A student with a master’s degree in a discipline appropriate to the field of PhD study is anticipated to complete the PhD program on a full-time basis in less than four years. The anticipated period for transfer students is less than five years from the date of registration in the MASc program. The DEC plays an important role in assisting students to meet this goal.
- Upon thesis completion, the student presents the thesis at a Departmental Doctoral Seminar before defending it at the Final Oral Examination as prescribed under the SGS degree regulations in this calendar.
- Prior to convocation, PhD students must prepare at least one formal manuscript, based on the thesis, for publication in refereed journals or refereed conference proceedings.

Courses
This list represents course offerings at the time of publication. Course descriptions are available on the UTIAS Web site.

Aircraft Flight Systems
AER 0503H Aeroelasticity
AER 1202H Advanced Flight Dynamics
AER 1211H Human Control of Flight Systems
AER 1214H Airplane Dynamics (Flight Laboratory)
AER 1215H Aerodynamics and Flight Mechanics of Rotorcraft
AER 1220H Remotely Piloted Flight Vehicles

Aerodynamics, Fluid Dynamics and Propulsion
AER 0510H Aerospace Propulsion
AER 1301H Kinetic Theory of Gases
AER 1302H Viscous Flows and Boundary Layers
AER 1304H Fundamentals of Combustion
AER 1306H Special Topics in Reacting Flows
AER 1310H Turbulence Modelling
AER 1311H Unsteady Gasdynamics
AER 1312H High Temperature Compressible Flows
AER 1314H Dynamics of Dusty Gases (reading course)
AER 1316H Fundamentals of Computational Fluid Dynamics
AER 1318H Topics in Computational Fluid Dynamics
AER 1320H Air-breathing Propulsion

Structures and Multidisciplinary Optimization
AER 0501H Advanced Mechanics of Structures
AER 1401H Introduction to Composite Materials
AER 1402H The Finite Element Method and Applications
AER 1411H Theory of Composite Materials
AER 1415H Optimization Concepts and Applications

Space Systems Engineering
AER 0506H Spacecraft Dynamics and Control I
AER 0525H Robotics
AER 1503H Spacecraft Dynamics and Control II
AER 1512H Multibody Dynamics
AER 1515H Intelligent Robotics
AER 1520H Microsatellite Design I
AER 1521H Microsatellite Design II

Engineering Physics
AER 1705H Plasma Physics and Fusion Energy
AER 1706H Fusion Reactor Systems
AER 1716H Fusion Reactor Materials (reading course)
AER 1717H Applied Plasma Physics I (reading course)
AER 1720H Applied Plasma Physics II (reading course)
AER 1725H Introduction to Surface Analysis

Research Seminars and Professional Courses
AER 1800H Research Seminar in Aerospace Science and Engineering (for first-year MASc students only)
AER 1810H MEng Project I (for MEng students only)
AER 1811H MEng Project II (for MEng students only)
JDE 1000H Ethics in Research (Students registered in the MASc or PhD programs are required to participate in this non-credit seminar course during their first or second session of registration. This course must be completed in order to graduate.)

Graduate Faculty

Full Members
Tim Barfoot - BASc, PhD
Christopher Damaren - BASc, MASc, PhD, FCASI (Associate Director & Graduate Coordinator)
Gabriele D’Eleuterio - BASc, MASc, PhD
Alis Ekmeckci - BS, MS, PhD
M. Reza Emami - BSc, MSc, PhD
James Gottlieb - BSc, MSc, PhD, FCASI
Peter Grant - BAS, MASc, PhD
Clinton Groth - BASc, MASc, PhD
Omer Gulder - BSc, MSc, PhD (Associate Director)
Anthony Haasz - BASc, MASc, PhD, FCASI
Jorn Hansen - BASc, MASc, PhD
Degree Programs

Hugh Liu - BEng, MEng, PhD
Joaquim Martins - MEng, MSc, PhD, Canada Research Chair
Lloyd Reid - BASc, MASc, PhD, FCASI, J Armand Bombardier Chair in Aerospace Flight
Jean Sislian - MSc, CandPhysMathSci, PhD
Peter Stangeby - BSc, MSc, DipSci, DPhil
Robert Zee - BASc, MASc, PhD
David Zingg - BASc, MASc, PhD, Senior Canada Research Chair, FCASI (Director)

Members Emeriti
Jacob de Leeuw - DipEng, MS, PhD, FRSC, FCASI, FAPS
James DeLaurier - BS, MS, PhD
Peter Hughes - BASc, MASc, PhD, MBA, FCASI, FCAE
Philip Sullivan - BEng, MEng, DIC, PhD, FCASI
Roderick Tennyson - BASc, MASc, PhD, FCASI

Associate Members
James Davis - BASc, MASc, PhD
Jacob Kleiman - BS, MS, PhD
Degree Programs

Anthropology  ANT

Faculty Affiliation
Arts and Science

Degree Programs Offered
Anthropology - MA, MSc, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Aboriginal Health, see p. 404
   • Anthropology, MA, MSc, PhD
2. Addiction Studies, see p. 406
   • Anthropology, MA, MSc, PhD
3. Aging, Palliative and Supportive Care Across the Life Course, see p. 408
   • Anthropology, MA, MSc, PhD
4. Asia-Pacific Studies, see p. 413
   • Anthropology, MA
5. Dynamics of Global Change, see p. 436
   • Anthropology, PhD
6. Environmental Studies, see p. 443
   • Anthropology, MA, MSc, PhD
7. Ethnic and Pluralism Studies, see p. 445
   • Anthropology, MA, MSc, PhD
8. Global Health, see p. 452
   • Anthropology, PhD
9. International Relations, see p. 458
   • Anthropology, MA
10. Jewish Studies, see p. 460
    • Anthropology, PhD
11. Sexual Diversity Studies, see p. 469
    • Anthropology, MA, MSc, PhD
12. South Asian Studies, see p. 471
    • Anthropology, MA, PhD
13. Women and Gender Studies, see p. 473
    • Anthropology, MA, PhD
14. Women's Health, see p. 478
    • Anthropology, MA, MSc, PhD

Overview
The Department of Anthropology offers research training and courses of instruction in five fields:
1. archaeology
2. linguistic anthropology
3. medical anthropology
4. physical/biological anthropology
5. social-cultural anthropology
   The Department offers a Master of Arts degree program in all five fields.
   The Master of Science degree program may normally be taken in three fields: archaeology, medical anthropology, and physical anthropology.
   The Doctor of Philosophy 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. Each student will normally be involved in fieldwork, in the broad meaning of the term, and in theoretical analysis.

Contact and Address
Web: www.chass.utoronto.ca/anthropology
E-mail: anthropology.graduate@utoronto.ca
Telephone: (416) 978-5416
Fax: (416) 978-3217

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

Degree Programs
Master of Arts

Minimum Admission Requirements
• Applicants admitted under the general regulations of the School of Graduate Studies.
• 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).

Program Requirements
• Four full-course equivalents which must include ANT 1000H and ANT 2000Y.
• Program normally extends over a 12-month period lasting from September to September. The MA program may also be taken on a part-time basis.

Master of Science

Minimum Admission Requirements
• Applicants admitted under the general regulations of the School of Graduate Studies.
• 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).

Program Requirements
• Five full-course equivalents which must include ANT 1000H and ANT 2500Y. Of the remaining 3.5 full-course equivalents, 1.5 will normally be science courses in archaeology, medical anthropology,
physical anthropology, or related disciplines depending on the student’s program.

- The MSc is a two-year program that is normally completed by the summer of the second year. The MSc program may also be taken on a part-time basis.

Doctor of Philosophy

Minimum Admission Requirements

- Applicants are admitted under the general regulations of the School of Graduate Studies.
- Admission is offered only to excellent students who, by the time of enrolment, have completed an MA degree in anthropology (or a cognate subject) or who have earned the equivalent of a four-year BA with a concentration in anthropology.
- Undergraduate students with exceptionally strong backgrounds (i.e., with a cumulative GPA of 3.85 or above) may apply for direct entry 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. 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 encouraged 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.

Program Requirements

Direct Entry Students

- Students admitted to the PhD program from a BA or BSc degree program are entering a five-year PhD program.
- Five full graduate courses, of which three will normally be taken in the first year. The remaining two courses can be taken in the second year, 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 third session of the third year (e.g., August 31 for students who start in September).

Entry with a Master’s Degree

- Students admitted to the PhD program from a MA or MSc degree program are entering a four-year PhD program.
- Minimum of three full-course equivalents.
- Attain at least an A- average in course work to continue in the PhD program in good standing.
- Submit research proposals by the end of the third session of the second year (e.g., August 31 for students who start in September).

All PhD Students

Before proceeding to full-time research, students must:

- be resident on campus for one year.
- complete a minimum of three full-course equivalents, at least 1.5 of which are normally in anthropology.
- gain experience in research methods and design; requirement can be filled by completing course work in methodology or, with the department’s assent, undertaking faculty-supervised fieldwork or laboratory research.
- 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.

Courses

Not all courses are offered every year. Check with the Department for current year’s offerings.

General

- ANT 1000H Anthropology: Theoretical Paradigms and Case Studies (Credit/No Credit)
- ANT 1001H Social Theory and Method in Anthropology
- ANT 1002H Evolutionary and Ecological Theory and Method in Anthropology
- ANT 1096H Quantitative Methods I
- ANT 1099H Quantitative Methods II
- ANT 1155H,Y Research (or reading seminar)
- ANT 1156H,Y Research (or reading seminar)
- ANT 1157H,Y Research (or reading seminar)
- ANT 1158H,Y Research (or reading seminar)
- ANT 2000Y MA Research Paper
- ANT 2500Y MSc Research Paper
- JAC 1001H Media, Mind, and Society
- JTH 3000H Coordinating Seminar in Ethnic and Pluralism Studies (for students in the Ethnic and Pluralism Studies Collaborative Program)

Archaeology

- JPA 1040Y Advanced Physics and Archaeology
- ANT 4020H Archaeology Theory and Technique
- ANT 4022H Culture Resource Management
- ANT 4025H Archaeology of Eastern North America

Courses which may continue over a program. The course is graded when completed.

+Extended course. For academic reasons, course work is extended into session following academic session in which course is offered.
Degree Programs

ANT 4026H Arctic Archaeology
ANT 4027H,Y Archaeology of Western North America
ANT 4029H Lithic Technology
ANT 4035H Far Eastern Culture History
ANT 4037H,Y+ Faunal Archaeo-Osteology
ANT 4038H Archaeology of Urban Development
ANT 4039H Lithic Technology
ANT 4040H Archaeology of Hunter-Gatherers
ANT 4041H Landscape Archaeology
ANT 4050H Zooarchaeology
ANT 4060H Specific Problems: Old World
ANT 4065H Specific Problems: New World
ANT 4066H Household Archaeology
ANT 4067H Historical, Industrial, and Ethnohistoric Archaeology: the Science of Documented Societies
ANT 4068H Archaeology of Technology

Linguistic Anthropology
JAL 1155H Language and Gender
JAL 1171Y Dialectology
ANT 5142Y Language in Anthropological Thought
ANT 5143Y Areal Studies in Linguistic Anthropology: Africa, East Asia, North America, Oceania
ANT 5144H Language and Social Action
ANT 5145H Classic Texts in Cultural Studies
ANT 5146H Colonial and Postcolonial Discourses
ANT 5162Y Ethnography of Communication
ANT 5167H Language, Ideology, and Political Economy
JSA 5147H Language, Nationalism and Post-Nationalism

Medical Anthropology
ANT 7001H Medical Anthropology I
ANT 7002H Medical Anthropology II

Physical/Biological Anthropology
ANT 3004H Advanced Topics in Primatology
ANT 3005H Advanced Topics in Paleoanthropology
ANT 3010H Human Osteology: Theory and Practice
ANT 3020H Method and Theory in Paleoanthropology
ANT 3021H Development of Thought in Biological Anthropology
ANT 3031H,Y Advanced Research Seminar I
ANT 3033H,Y Advanced Research Seminar III
ANT 3034H,Y Advanced Research Seminar IV
ANT 3035H,Y Advanced Research Seminar V
ANT 3037H,Y Advanced Research Seminar VII
ANT 3038H,Y+ Advanced Research Seminar VIII
ANT 3040H Approaches to Fieldwork I
ANT 3041H Approaches to Fieldwork II
ANT 3050H Reading Course in Specific Area and Theory I
ANT 3052Y Reading Course in Specific Area and Theory III
ANT 3054H Reconfiguring Kinship (Studies): Conceiving Relatedness in the Twenty-first Century

Graduate Faculty

Full Members
Gavin Alderson-Smith - MA, PhD
Sandra Bamford - BA, MA, MA, PhD
Edward Banning - BA, MA, PhD
Joshua Barker - BA, MA, PhD
David Begun - BA, MA Ph.D
Janice Bodd - BA, MA, PhD, FRSC (Chair)
Michael Chazan - BA, MA, PhD
Gary Coupland - BA, MA, PhD
Gary Crawford - BSc, MA, PhD
Hilary Cunningham - BA, MA, PhD
Marcel Danesi - BA, MA, PhD, FRSC
Degree Programs

George JS Dei, BA, MA, PHD
Martin Paul Evison - PHd
T Max Friesen - BA, MA, PhD
Gillian Gillison - BA, PhD
Monica Heller, BA, MA, PHD
Ivan Kalmar - BA, MA, PhD
Michael Lambek - BA, MA, PhD, FRSC, Canada
Research Chair
Martha Latta - BA, MA, PhD
Shawn Lehman - BA, MA, PhD
Michael Levin - BA, MA, PhD
Tania Li - BA, PhD, CRC
Hy Van Luong - BA, MA, PhD
Bonnie McElhinny - BA, MA, PhD
Heather Miller - BA, MSc, MA, PhD (Coordinator of Graduate Studies)
Valentina Napolitano - BSc, PhD
Esteban Parra - BA, MSc, PhD
Susan Pfeiffer - BA, MA, PhD
Tracy Rogers - BA, MA, PhD
Todd Sanders - BA, MA, MSc, PhD
Shiho Satsuka - BA, MA, PhD
Lawrence Sawchuk - BA, MA, PhD
Daniel Sellen - BA, MA, PhD, CRC
Jack Sidnell - BA, MA, PhD
Krystyna Sieciechowicz - BA, MA, PhD
Becky Sigmon - BA, MS, PhD
David Smith - PhD
Je Sook Song - BA, PhD
David Turner - BA, MA, PhD
Holly Wardlow - BA, MPH, PhD
Kue Young - BSc, MD, MSc, PhD, FRCPC, LMCC
Ezra Zubrow - BA, MA, PhD

Members Emeriti
Frances Burton - BSc, MA, PhD
Peter Carstens - BA, PhD
Robert Drewitt - PhD
Maxine Kleindienst - BA, MA, PhD
Richard Lee - BA, MA, PhD, FRSC, University Professor
Jamshed D Mavalwala - BS, MS PhD
Shuichi Nagata - MA, PhD
Stuart Philpott - BA, MA, PhD
Ajit Ray - BSc, MSc, PhD
Henry Rogers - BA, MA, PhD
William Samarin - BA, PhD
Robert Shirley - BA, MA, PhD
Rosamond Vanderburgh

Associate Members
Dylan Clark - PhD
Girish Daswani - BA, BSc, MSc, PhD
Prakruti Dave - BA, MA, PhD
Jennifer Jackson
Helen Kurki - PhD
Lena Mortensen - AB, PhD
Joyce Parga - BSc, MA, PhD
Chen Shen - BA, MA, PhD
Wen Ching Sung - PhD MS BA
Degree Programs

Architecture, Landscape, and Design

Faculty Affiliation
Architecture, Landscape, and Design

Degree Programs Offered
Architecture, MArch
Landscape Architecture, MLA
Urban Design, MUD

Collaborative Programs Offered
Degree programs that participate in:
1. Knowledge Media Design, see p. 462
   • Architecture, MArch
   • Landscape Architecture, MLA
   • Urban Design, MUD

Overview
The Faculty of Architecture, Landscape, and Design offers three graduate programs.

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.

The Master of Landscape Architecture (MLA) is a professional program which focuses on urban landscape architecture, design, and theory within a challenging studio-based curriculum. Integrated courses in history, technology, and the environment, as well as options for free electives, provide a comprehensive professional landscape architecture education.

The Master of Urban Design (MUD) is a post-professional program which 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 the post-metropolis, 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.

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Faculty of Architecture, Landscape, and Design
University of Toronto
230 College Street
Toronto, Ontario M5T 1R2
Canada

Degree Programs

Architecture

Master of Architecture

Minimum Admission Requirements

3.5-year program
• Four-year bachelor’s degree (BA, BSc, BASc) with a final year grade point average of at least mid-B, and showing leadership potential in the field.
• Required: courses in secondary calculus, secondary physics, and university architectural history (0.5 full-course equivalent).
• Recommended: preparation in the visual arts, such as drawing, sculpture, graphics, photography, film, or new media, as well as computing and advanced writing skills.

Second Year Advanced Standing Option in MArch – 2.5-year program
• Four-year non-professional bachelor’s degree in architectural studies, environmental design, or 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. Each MArch applicant with a suitable undergraduate degree will be evaluated for this option during the admissions process.
• Required: minimum previous completion of three design studio courses, two courses in visual communications or representation, two courses in architecture history and theory (one in twentieth-century), and two courses in architectural technology and ecology.

Post-Professional Advanced Standing Option in MArch – 1.5-year program
• 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 professional degree from a recognized university.
• Students enter the third-year of the MArch program.
• The Post-Professional Advanced Standing Option does not grant a professionally accredited degree.

General Program Requirements

• The course of study is rigorous and comprehensive, preparing 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. A B- grade in two design studio courses or a B- grade in any three courses normally results in a recommendation to the School of Graduate Studies to terminate the student’s eligibility in the degree program.
• There is no language requirement other than proficiency in English. Writing support is integrated into the program in order to develop specialized skills in writing which are essential to effective learning and communication in the design fields.

Specific Program Requirements

3.5-year program
• Students must take a total of 17.5 full-course equivalents (FCE) as follows:
  o 15.0 FCE in core courses
  o 2.0 FCE option design studios
  o 0.5 FCE thesis preparation and research course
  o 1.0 FCE professional practice course
  o 2.5 FCE technics and planning courses
  o 0.5 FCE computer modelling course
• The program is normally completed in 7 sessions (3.5 years) of full-time study; the maximum time limit to complete degree requirements is 6 years.

Second Year Advanced Standing Option – 2.5-year program
• Students must take a total of 12.5 full-course equivalents (FCE) as follows:
  o 10.0 FCE core courses
  o 2.0 FCE design studios
  o 2.0 FCE option design studios
  o 0.5 FCE thesis preparation and research course
  o 1.5 FCE design thesis
  o 0.5 FCE computer modelling course
  o 2.5 FCE technics and planning courses
  o 1.0 FCE professional practice course
  o 2.5 FCE elective courses of which 1.0 FCE must be in the History and Theory stream
• The program is normally expected to be completed in 5 sessions (2.5 years) of full-time study; the maximum time limit to complete degree requirements is 5 years.

Post-Professional Advanced Standing Option – 1.5-year program
• Students must take a total of 7.5 full-course equivalents (FCE) as follows:
  o 4.5 FCE core courses
  o 2.0 FCE option design studios
  o 0.5 FCE proseminar course
  o 0.5 FCE thesis preparation and research course
  o 1.5 FCE design or research thesis
  o 3.0 FCE elective courses
• The program is normally completed in 3 sessions (1.5 years) of full-time study; the maximum time limit to complete degree requirements is 4 years.

Courses

Core Courses

Design
ARC 1011Y Architectural Design Studio 1: Design
ARC 1012Y Architectural Design Studio 2: Site, Building, Tectonics
ARC 2013Y Architectural Design Studio 3: Culture and the Metropolis
ARC 2014Y Architectural Design Studio 4: Comprehensive Building Project
ARC 3015Y Architectural Design Studio 5: Option Studios
ARC 3016Y Architectural Design Studio 6: Option Studios
ARC 3017H Thesis Research and Preparation
ARC 4018Y Architectural Design Studio 7: Thesis

Computer Modelling
ARC 2023H Intermediate Computer Applications in Architecture

Visual Communication
ARC 1021H Visual Communication 1
ARC 1022H Visual Communication 2

History and Theory
ARC 1031H Historical Perspectives on Topics in Architecture 1
ARC 1032H Historical Perspectives on Topics in Architecture 2
## Degree Programs

### Technics and Planning
- **ARC 1041H** Architecture in its Technological-Ecological Context
- **ARC 1042H** Site Engineering and Ecology
- **ARC 2043H** Building Science, Materials and Construction 1
- **ARC 2044H** Structures 1
- **ARC 2045H** Building Science, Materials and Construction 2
- **ARC 2046H** Structures 2
- **ARC 2047H** Environmental Systems

### Proseminar
- **ALA 3031H** Proseminar

### Professional Practice
- **ARC 3052Y** Professional Practice

### Elective Courses
Not all elective courses are offered every year. Please check the timetable available from the program office in August.

#### Design
- **ARC 1013H** Graphic Design
- **ARC 1014H** Furniture Design
- **ARC 1015H** Set Design for Television
- **ARC 1016H** Selected Topics in Industrial Design
- **ARC 2015H** Global Architecture: Urban Analysis and Documentation

#### Computer Modelling
- **ARC 3024H** Advanced Computer Applications in Architecture

#### History and Theory
- **ARC 1033H** Architecture, Media and Communications
- **ARC 1034H** Architecture, Philosophy, Art
- **ARC 1035H** Toronto Architecture and Urban Form
- **ARC 1036H** Architectural Criticism
- **ARC 1037H** Topics in Architecture and Cultural Difference
- **ARC 1038H** Urban Design History and Theory
- **ARC 1039H** Housing Design: Theory and Practice
- **ARC 2031H** (Re)Constructing Domesticity: Ideas and Techniques of Construction in Mid-Century North American Houses

#### Landscape Architecture

### Master of Landscape Architecture

#### Minimum Admission Requirements

**3-year program**
- Four-year bachelor's degree (BA, BSc, BASc, BES, BFA, BCom) with a minimum average of mid-B and demonstrated leadership potential in the field. Preference is given to applicants who have completed a balanced undergraduate education that includes study in the arts, sciences, and humanities.
- **Recommended:**
  - undergraduate courses in biology/ecology, geography, English, and history.
  - preparation in the visual arts, such as drawing, sculpture, graphics, photography, film, or new media, as well as in computing and advanced writing.

**Second Year Advanced Standing Option in MLA – 2-year program**
- Four-year or five-year bachelor's degree in architecture, architectural studies, environmental design, or comparable degree focusing on the design of 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 MLA admissions committee. Each applicant with a suitable undergraduate degree will be evaluated for this option during the admissions process.
- **Required:** minimum previous completion of three design studio courses, two courses in visual communications or representation, two courses in architectural history and theory (one in twentieth-century), and two courses in architectural technology and/or ecology.

**Post-Professional Advanced Standing Option in MLA – 1-year program**
- 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 from a recognized university.
- Students enter the third-year of the MLA program.
- The Post-Professional Advanced Standing Option does not grant a professionally accredited degree.
General Program Requirements

- Students study full-time, taking all required courses in each given session. A B- grade in two design studio courses or a B- grade 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 language requirement other than proficiency in English. Writing support is integrated into the program in order to develop specialized skills in writing which are essential to effective learning and communication in the design fields.

Specific Program Requirements

3-year program
- Students must take a total of 15.5 full-course equivalents (FCE) as follows:
  - 14.0 FCE in core courses
  - 4.0 FCE design studios
  - 1.0 FCE option design studio
  - 0.5 FCE thesis preparation and research course
  - 1.5 FCE design thesis
  - 0.5 FCE environment field courses
  - 1.5 FCE history theory courses
  - 1.5 FCE visual communication courses
  - 1.5 FCE technology courses
  - 1.0 FCE environment courses
  - 0.5 FCE professional practice course
  - 1.5 FCE in electives of which it is recommended that 1.0 FCE be taken in other academic divisions of the University.

2-year program - Second Year Advanced Standing Option in MLA
- Students must take a total of 10.5 full-course equivalents (FCE) as follows:
  - 10.5 FCE in core courses
  - 2.0 FCE design studios
  - 1.0 FCE option design studio
  - 0.5 FCE thesis preparation and research course
  - 1.5 FCE design thesis
  - 0.5 FCE environment field courses
  - 1.5 FCE history theory courses
  - 0.5 FCE visual communication courses
  - 0.5 FCE computation course
  - 1.0 FCE technology courses
  - 1.0 FCE environment courses
  - 0.5 FCE professional practice course

1-year program - Post-Professional Advanced Standing Option in MLA
- Students must take a total of 5.0 full-course equivalents (FCE) as follows:
  - 5.0 FCE in core courses
  - 1.0 FCE option design studio
  - 0.5 FCE proseminar course
  - 0.5 FCE thesis preparation and research course
  - 1.5 FCE design thesis
  - 0.5 FCE computation course
  - 0.5 FCE technology course
  - 0.5 FCE professional practice course

- The program normally is completed in 2 sessions (1 year) of full-time study; the maximum time limit to complete degree requirements is 4 years.

Courses

Core Courses

Design
LAN 1011Y Design Studio 1
LAN 1012Y Design Studio 2
LAN 2013Y Design Studio 3
LAN 2014Y Design Studio 4
LAN 3015H Thesis Research and Preparation
LAN 3016Y Design Studio Options
LAN 3017Y Design Studio Thesis

Computation
LAN 3025H Advanced Computation in Landscape Architecture

Visual Communication
LAN 1021H Visual Communication 1
LAN 1022H Visual Communication 2
LAN 2023H Intermediate Digital Visual Communications in Landscape

History and Theory
LAN 1031H History Theory Criticism 1
LAN 1032H History Theory Criticism 2
LAN 2018H Contemporary Issues in Urban Landscape Design

Technology
LAN 1045H Site Engineering and Ecology
LAN 2042H Urban Site Technologies 1
LAN 3045H Urban Site Technologies 2

Environment
LAN 1041H Urban Plant Ecosystems 1 (field course)
LAN 1043H Urban Plant Ecosystems 2 (field course)
LAN 2043H Integrated Ecological Studies
LAN 2044H Urban Environmental Systems

Proseminar
ALA 3031H Proseminar
Degree Programs

Professional Practice
LAN 3051H  Professional Practice

Elective Courses
Not all elective courses are offered every year. Please check the timetable available from the program office in August.

Design
LAN 1033H Urban Landscape Architecture and Community
LAN 1034H Landscape and Art
LAN 1035H Urban Open Space Morphologies and Typologies
LAN 2033H Landscape and Urban Form
LAN 2035H Landscape Design Research Methods

Computation
LAN 2034H Landscape Architecture and Digital Communications

History and Theory
LAN 1036H The Historic Basis for the Contemporary Use of Plants in Landscape Design
LAN 2036H Topics in Landscape History and Theory
LAN 2038H Landscape Conservation and Restoration
LAN 2039H Independent Study in Landscape Architecture
LAN 3031H Mass-Urbanization in the Twenty-First Century
LAN 3033H The Landscape Garden in History, Literature and Art
LAN 3034H Life Among the Ruins: Post-Crisis Scenarios

Environment
LAN 2037H Selected Topics in Landscape Architecture, Technology and Ecology

Urban Design

Master of Urban Design

Minimum Admission Requirements

2-year program
- 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 their studies included a design specialization or if they have professional design experience.
- All applicants must submit a portfolio of design work for review. Applicants with a planning background may also satisfy the design requirement by taking a preliminary make-up year in design in the Faculty of Architecture, Landscape, and Design.

General Program Requirements
- Students study full-time, taking all required courses in each given session. A B- grade in two design studio courses or a B- grade in any three courses will normally result in a recommendation to the School of Graduate Studies to terminate the student’s candidacy for the degree program.
- There is no language requirement other than proficiency in English. Writing support is integrated into the program to develop specialized skills in writing which are essential to effective learning and communication in the design fields.

Specific Program Requirements
- Students must take a total of 10.0 full-course equivalents (FCE) as follows:
  - 7.0 FCE in core courses
    - 1.0 FCE design studio
    - 2.0 FCE option design studio
    - 0.5 FCE thesis preparation and research course
  - 1.5 FCE design thesis
  - 0.5 FCE history, theory, criticism course
  - 1.5 FCE other courses
  - 3.0 FCE in electives of which 1.0 FCE must be selected from offerings in the History, Theory, and Criticism Category.
- The program normally is completed in 4 sessions (2 years) of full-time study; the maximum time limit to complete degree requirements is 5 years.

Courses

Core Courses

Design
URD 1011Y Urban Design Studio
URD 1012Y Urban Design Studio Options
URD 2012Y Independent Studio in Urban Design (may be undertaken in lieu of an option studio)
URD 2013Y Urban Design Studio Options
URD 2015Y Urban Design Studio Thesis

History, Theory, Criticism
URD 1031H Urban History, Theory, Criticism

Other
URD 1021H Urban Design Computation
URD 1044H Urban Design and Development
URD 2014H Thesis Research and Preparation
URD 2041H Planning and Real Estate Development

Elective Courses
Not all elective courses are offered every year. Please check the timetable available from the program office in August.
### History, Theory, Criticism

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>URD 1032H</td>
<td>Urban Design in the History of the Post-Industrial World</td>
<td>John Shnier - BES, BArch</td>
</tr>
<tr>
<td>URD 1033H</td>
<td>Urban Design Culture and Media</td>
<td>Liza Stiff - BFA Hons, MArch</td>
</tr>
<tr>
<td>URD 1034H</td>
<td>Toronto – Urban Design and Urban Form</td>
<td>Kevin Sugden - BSc, BES, BArch</td>
</tr>
<tr>
<td>URD 1035H</td>
<td>Selected Topics in Urban Design</td>
<td>Charles Waldheim - BDes (Hons), MArch</td>
</tr>
<tr>
<td>URD 1036H</td>
<td>Case Studies in Urban Design</td>
<td>Mason White - BArch, MArch</td>
</tr>
<tr>
<td>PLA 1650H</td>
<td>Urban Design: History, Theory, Criticism</td>
<td>Shane Robert Williamson - BSc (Arch), MArch</td>
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</tbody>
</table>

### Other

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>URD 1022H</td>
<td>Topics in Computer-Aided Urban Design</td>
<td>(Coordinator of Graduate Studies)</td>
</tr>
<tr>
<td>URD 1041H</td>
<td>Urban Infrastructure in Developing Countries</td>
<td>Robert Wright - BScRec, MLA</td>
</tr>
<tr>
<td>URD 1042H</td>
<td>Urban Design and Environmental Systems</td>
<td>Peter Zimmerman - BES, BA</td>
</tr>
<tr>
<td>URD 1043H</td>
<td>Independent Study in Urban Design</td>
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</tr>
</tbody>
</table>

### Graduate Faculty

#### Full Members
- George Baird - BArch, AM (Hon), OAA, FRAIC (Dean)
- Rodolphe El-Khoury - BFA, BArch, MScAS, MArch, PhD
- Larry Richards - BArch, MArch

#### Members Emeriti
- Blanche van Ginkel - BArch, MCP

#### Associate Members
- Pierre Belanger - BLA, MLA
- Tom Bessai - BArch, MA, BA
- Adrian Blackwell - BES, BArch, MUD
- David Bowick - BEng
- David Carter - MA, MArch
- Aziza Chaouni - BSCCE, MARCH
- Rebecca Comay - BA, MA, PhD
- Robert Cordner - BArch
- John Danahy - BLA, C UrbDes, MSc Urb&DesPl
- Edward Fife - BLA, MLA
- Steven Fong - BArch, MArch
- Margaret Graham - BES, BARCH, MDesign Studies
- Paul Hess - BA, MUP, PhD
- Jane Hutton - BSc, MLA
- Dieter Janssen - BArch(Hons), MArch
- Andrew Jones - BArch, MA(RCA)
- Ted Kesik - BASc, MASc, PhD, PEng
- Robert Levit - BA, MArch
- David Lieberman - BFA (Cal Arts), AA Dipl (London)
- An Te Liu - BA, MArch
- Mary Lou Lobesinger - BA, BES, BArch, MDes, PhD
- Christos Marcopoulos - BArch
- Carol Leila Moukeiber - BArch, BArs
- Diarmuid Nash - MArch, BArch
- Alissa North - BLA, MLA
- Peter North - BLA, MLA
- Andrew Payne - BA, MA, PhD
- Pina Petricone - BArch, MArch
- James Roche - BFA, MLA
- Barry Sampson - BArch
- Elise Shelley - MLA, MArch, BS Arch, Brigitte Shim - BES, BArch

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John Shnier - BES, BArch
Liza Stiff - BFA Hons, MArch
Kevin Sugden - BSc, BES, BArch
Charles Waldheim - BDes (Hons), MArch
Mason White - BArch, MArch
Shane Robert Williamson - BSc (Arch), MArch

Robert Wright - BScRec, MLA
Peter Zimmerman - BES, BA
Degree Programs

Art

Faculty Affiliation
Arts and Science

Degree Programs Offered
History of Art – MA, PhD
Visual Studies – MVS

Collaborative Programs Offered
Degree programs that participate in:
1. Book History and Print Culture, see p. 424
   • History of Art, MA, PhD
   • Visual Studies, MVS
2. Jewish Studies, see p. 460
   • History of Art, PhD
3. Knowledge Media Design, see p. 462
   • Visual Studies, MVS
4. Sexual Diversity Studies, see p. 469
   • History of Art, MA, PhD
   • Visual Studies, MVS

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

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

The Master of Visual Studies is a two-year, full-time professional program with two fields: Studio (which prepares students to further their visual art practice) and Curatorial Studies (which prepares students for a contemporary curatorial practice in the visual arts).

Contact and Address
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Graduate Department of Art
University of Toronto
Room 6037A, Sidney Smith Hall
Toronto, Ontario M5S 3G3
Canada

Degree Programs

History of Art

Master of Arts

Minimum Admission Requirements
• Strong overall grade average in history of art and closely related subjects, with at least B+ average in recent senior art history courses. Outstanding applicants with other backgrounds may be considered.

Program Requirements
• 3.0 graduate full-course equivalents (FCE); course work must be chosen from at least three of four areas: Ancient, Medieval, Renaissance/Baroque, Modern/Contemporary. No more than 2.0 FCE may be taken in any one of these areas. The equivalent of 1.0 FCE may be taken in another graduate department (e.g., Medieval Studies, Near and Middle Eastern Civilizations), subject to the approval of the Department of Art and the other department concerned.

• Reading knowledge of French, German, or Italian; tested in the first session.

• Orientation to Art Historical Research Methods in first year.

• Program normally completed in one year.

Doctor of Philosophy

Minimum Admission Requirements
• Minimum A- average in MA

• Direct-entry from BA with exceptionally strong academic record; minimum grade average of A- in art history and humanities courses in last two years.

• Reading knowledge of French, German, or Italian; tested in the first session.

• One or more additional language(s) may be required; students unable to meet language requirements for particular courses may be refused admission to courses; enrolment in all courses is limited and subject to instructor’s approval.

• Students without a MA in Art from U of T may be required to complete at least 1.0 additional full-course equivalent (FCE).

• Acceptance limited to students who propose theses corresponding to research expertise of faculty. See faculty research profiles at www.art.utoronto.ca/people/art-history/graduate-faculty/index.html

• Orientation to Art Historical Research Methods in first year.
Program Requirements

- **Students with MA** take at least 2.0 full-course equivalent (FCE) graduate courses. MA and PhD courses combined should be in three of the following four areas: Ancient, Medieval, Renaissance/Baroque, Modern/Contemporary. Courses crossing boundaries will count as one area only.

- **Students with four-year BA** must take a minimum of 4.5 FCE in art history and maintain an average grade of at least an A-

- Departmental methodology course; with departmental approval, credit may be given for a course taken previously at U of T or elsewhere

- Comprehensive examinations, the first focusing on one of the four areas, the second on the dissertation field, and the third (oral) discussing the first two.

- Following successful completion of comprehensive examinations, students must formally establish their PhD Advisory Committee and develop a detailed proposal for their research

- Pass examinations in two languages (German, French, or Italian) if not already done so in the MA. Students focusing on Ancient, Medieval, and Renaissance/Baroque will normally be expected to pass the examination in German as one of their two languages. Additional languages may be required depending on research needs of student's dissertation topic.

Courses
Not all courses are offered each year. Check departmental Web site for course availability.

Methods
FAH 1001H Methods of Art History

Ancient
FAH 2006H Art and Archaeology of the Prehistoric Aegean
FAH 2007H Archaeology of Homer
FAH 2009H Art and Archaeology of Prehistoric Cyprus
FAH 2012H The Appliance of Science: Art, Archaeology, and Science
FAH 2014H Greeks and the East
FAH 2015H The Arts of Fifth-Century Athens
FAH 2016H First Civilizations: East Mediterranean Prehistory
FAH 2019H Greek Sculpture
FAH 2020H Attic Vase Painting
FAH 2030H Rome’s Monumental Topography
FAH 2032H History and Myth
FAH 2033H Triumphant Forms
FAH 2034H Topics in Roman Imperial Art
FAH 2035H Hellenistic Naturalism and Its Roman Legacy
FAH 2039H The Roman Reception of Greek Art: Image Transfer and Cultural Translation
FAH 2040H Monument and Epitaph
FAH 2050H Roman Portraiture
FAH 2055H The Art of Late Antiquity

Medieval
FAH 1120H Problems in Patronage
FAH 1121H Twelfth-Century Renaissance?
FAH 1122H Crusaders in the East: Art and Life
FAH 1123H The Art of the Medieval Book
FAH 1124H Byzantine Church Decoration
FAH 1125H Problems in Medieval Pilgrimage
FAH 1126H Exceptional Cities of the Middle Ages
FAH 1127H Early Medieval Art
FAH 1128H Byzantine Art and the West
FAH 1130Y The Classical Tradition in Western Medieval Art
FAH 1131H Profane Medieval Art
FAH 1134H Communal Painting and Propaganda in Italy During the Thirteenth and Fourteenth Centuries
FAH 1135H Naples in the Later Middle Ages
FAH 1141H Words and Images in Medieval Art
FAH 1171H Beginning of Modernism: From Images to Pictures
FAH 1172H Medieval Visualizations of “Reality”: Life, War, and Death
FAH 1200H Crusader Art
FAH 1228H Representation, Information, and Interpretation of Medieval Pictures

Renaissance and Baroque
FAH 1209H Art and Anachronism in the Renaissance
FAH 1211H The Altarpiece in Renaissance Italy
FAH 1212H The Institution of the Work of Art
FAH 1213H Art Historiography in Italy, 1550-1750
FAH 1215H History of Bad Art from Gothic to Rococo
FAH 1218H Michelangelo
FAH 1219H Renaissance Art Discovers the Icon
FAH 1226H Architecture and Alchemy Before Modernism
FAH 1241H The Artist’s Body
FAH 1240H Art Biography
FAH 1243H The Economic Lives of Renaissance and Baroque Artists
FAH 1245H Pieter Bruegel and Netherlandish Sixteenth-Century Painting
FAH 1246H Renaissance Gothic
FAH 1249H Margaret of Austria and the Renaissance in the Netherlands
FAH 1250H Renaissance Sculpture and Architecture in the Netherlands
FAH 1255H Caravaggio
FAH 1280H Art and Reform in Early Sixteenth-Century Italy
FAH 1285H Gianlorenzo Bernini
FAH 1290H The Jesuit Baroque
FAH 1291H Architecture, Language, and Literature
FAH 1292H Devotional Spaces in Early Modern Europe
FAH 1293H Architecture of the English Renaissance and Baroque
Degree Programs

Modern/Contemporary
FAH 1300H French Architectural Theory, 1700-1900
FAH 1305H Administrations, Collectors, and Dealers in France, 1648-1824
FAH 1310H History Painting in France, 1648-1824
FAH 1311H Prints and the Ancien Régime
FAH 1320H Orientalism in French Nineteenth-Century Painting
FAH 1410H Artwriting, Past and Present
FAH 1420H Theories of the Sublime in Art
FAH 1455H The Paris Salon, 1784-1900
FAH 1468H Orientalism in French Nineteenth-Century Painting
FAH 1469H The Enemies of Impressionism
FAH 1472H Photography in South Asia
FAH 1474H Avant-Garde, Neo-Avant-Garde
FAH 1475H Picasso
FAH 1476H Surrealism and Post-World War II Art in Europe, the United States, and Canada
FAH 1477H Psychoanalysis and the Visual
FAH 1478H Art and Animation
FAH 1480H Art Before and After Modernity
FAH 1490H Art and Intersubjectivity
FAH 1492H Retreating the Aesthetic
FAH 1493H Queer Sexuality, Visuality & Theory
FAH 1494H The Archive: Logics, Limits, Remains
FAH 1510H Contemporary Theories of Photography
FAH 1515H Photography and Community
FAH 1520H Photography and Modernism
FAH 1751H Architectural Literature in the Nineteenth and Twentieth Centuries
FAH 1752H The Circulation of Architectural Knowledge
FAH 1800H James Wilson Morrice
FAH 1801H Portraiture in Canada, 1760-1860: Painting into Photography
FAH 1850H Cornelius Krieghoff: Images of Canada
FAH 1870H Recent Canadian Art in International Perspective
FAH 1901H Tom Thomson
FAH 1910H Contemporary Art of South Asia and Its Diaspora
FAH 1920H Primitivism to Globalism: Theories of Otherness in Modern and Contemporary Arts
FAH 1921H GeoAesthetics: Nature, Landscape and the Earth in Recent Art and Theory
FAH 1922H Realms of Exile
FAH 1923H Modernist Exiles in Postcolonial Perspective
FAH 1924H Icon, Artwork, Fetish
FAH 1925H Spectatorship and Narrative: The Politics of Exhibiting
FAH 1930H Issues in the History of Contemporary Art after 1960
FAH 1931H Contemporary Art: Theory and Criticism
FAH 1952H From Steppe to City: Art of the Mongols in China
FAH 1953H Chinoiserie: China and Her Arts in the European Imagination
FAH 1954H Mimesis, Perspective, Vanguardism, Text, and Other Strategies of Seeing Through Chinese Painting
FAH 1955H Decoding Chinese Painting

Exhibitions, Collections, and Museums
FAH 3004H Special Studies in Collections
FAH 3010H, Y Art and the Museum

Reading Courses
FAH 3000H, Y Special Studies in History of Art (Only one full-course equivalent with this prefix is permitted in any one degree program.)
FAH 3011H Readings in Ancient Art (Credit/No Credit)
FAH 3012H Readings in Medieval Art (Credit/No Credit)
FAH 3013H Readings in Renaissance and Baroque Art (Credit/No Credit)
FAH 3014H Readings in Modern and Contemporary Art (Credit/No Credit)

Research Paper
FAH 4000Y Research Paper

Joint Courses with Other Departments
JAI 1000H Joint Ancient Interconnections: The Eastern Mediterranean During the Middle and Late Bronze Age Period (Credit/No Credit)

Undergraduate/Graduate Courses
Periodically, the Department may offer fourth-year undergraduate courses that have been recognized for graduate credit. Please visit the departmental Web Site and discuss with the Graduate Coordinator.

Relevant Courses in Other Departments
EAS 1229H Topics in Chinese Aesthetics
EAS 1339H Topics in Chinese Art Theories
MSL 2050H Artists in the Museum
NMC 2500Y Introduction to Islamic Art and Architecture
NMC 2520H Western Medieval Islamic Architecture
NMC 2521H The Taj Mahal and Its Origins: Medieval Islamic Architecture in Iran, Central Asia, and India
NMC 2526H Islamic Painting
NMC 2527H Islamic Decorative Arts

Visual Studies

Master of Visual Studies: Studio
Master of Visual Studies: Curatorial Studies

Minimum Admission Requirements
- Four-year U of T bachelor's degree (BA, BSc) with significant course work in humanities and cultural theory, or an equivalent degree from another recognized university, or a four-year BFA degree from a recognized university.
- Overall average of at least a B+.
• Exceptional portfolio (comprising artworks or curatorial projects and/or critical writing) from an undergraduate program or a substantial exhibition record that accompanies their portfolio.
• Good command of English. Facility in 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.

Program Requirements
• Full-time program normally extends over two years and begins in September.
• MVS: Studio 4.5 full-course equivalents (FCE) in MVS and 1.5 FCE in outside electives.
• MVS: Curatorial Studies 3.5 FCE in MVS and 2.5 FCE in outside electives.
• Student supervised by an Advisory Panel.
• MVS Proseminar, a non-credit course that normally meets biweekly.

MVS Studio Courses

Required 4.5 full-course equivalents
VIS 1001H Interdisciplinary Studio Practicum/Critiques I
VIS 1003H Interdisciplinary Studio Practicum/Critiques II
VIS 1004H Internship
VIS 1010H Contemporary Art Since 1960
VIS 1020H Contemporary Art: Theory and Criticism
VIS 2001H Studio Practicum/Critiques III
VIS 2002H MVS Contemporary Art Issues
VIS 2003Y MVS Project

MVS Curatorial Studies Courses

Required 3.5 full-course equivalents
VIS 1101H Paradigmatic Exhibitions: History, Theory, Criticism
VIS 1010H Contemporary Art Since 1960
VIS 1020H Contemporary Art: Theory and Criticism
VIS 1102H Curatorial Studies Collaborative Project
VIS 1004H Internship
VIS 2101Y MVS Curatorial Studies Exhibition Project

Graduate Faculty

Full Members
Christy Anderson
Jill Caskey - AB, MA, MPH, PhD (Coordinator of Graduate Studies & Associate Chair)
Mark Cheetham - BA, MA, PhD
Adam Cohen - BA, MA, PhD
Bjorn Ewald
Elizabeth Harney - AB, MA, PhD
George Hawken
Kajri Jain
Louis Kaplan - BA, MA, PhD
Christina Katsougiannopoulou
Ethan Matt Kvaler - BA, MA, PhD
Elizabeth Legge - BA, MA, PhD (Chair)
Evonne Levy - MFA, PhD
Sue Lloyd
Tanya Mars
John Massey
Edward Pien
Jennifer Purtle
Dennis Reid - BA, MA
John Ricco - BA, MA, PhD
Linda Safran
Susan Schelle
Philip Sohm - BA, MA, PhD
Lisa Steele (Graduate Program Director, MVS)
Alison Syms - PhD
Joanne Tod
Kim Tomczak
Shirley Witasalo
Jens Wollesen - PhD, Dr phil habil

Members Emeriti
Luba Eleen
Douglas Richardson - BA, MA, PhD
Giuseppe Scavizzi - PhD
Joseph Shaw - BA, MAT, PhD, DHumLett
Maria Shaw - BA, MA, PhD
Frederick Winter

Associate Members
L Jane Abray - BA, MA, MPH, PhD
Kenneth Bartlett - BA, MA, PhD
Deepali Dewan
Barbara Fischer
David Hlynsky - BFA
Will Kwan - BA, MFA
**Degree Programs**

**Astronomy and Astrophysics**  
AST

**Faculty Affiliation**  
Arts and Science

**Degree Programs Offered**  
**Astronomy and Astrophysics** - MSc, PhD

**Collaborative Programs Offered**  
Degree programs that participate in:  
1. Astrophysics, see p. 415
   - Astronomy and Astrophysics, MSc

**Overview**  
The 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), located in the same building. This association enables our students to consult with leading theorists associated with CITA.

The David Dunlap Observatory (DDO) houses a 1.88-m telescope, the largest in Canada, which is equipped with efficient CCD spectroscopic instruments. Faculty and students enjoy access to the Dupont 2.5-m telescope at Las Campanas under an instrumentation development collaboration with the Carnegie Observatories. We have an active experimental program using telescopes on long-duration stratospheric balloons, telescopes for cosmological and Galactic research.

We also use the major optical, radio, and satellite observing facilities of the world. 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.

There are approximately 100 faculty, post-doctoral fellows, graduate students, and staff in the Department of Astronomy and Astrophysics and in CITA. 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  
E-mail: grad.sec@astro.utoronto.ca  
Telephone: (416) 978-2016  
Fax: (416) 971-2026

Department of Astronomy and Astrophysics  
50 St. George Street  
University of Toronto  
Toronto, Ontario M5S 3H4  
Canada
Degree Programs

Astronomy and Astrophysics

ment in the four-year program except for courses deemed necessary by the student’s PhD committee.

- 2.0 full-course equivalents (FCE): AST 1501Y and AST 1500Y, with different supervisors. An oral exam by committee is held for each.
- 400*Y (in sequence of the last digit: 2, 3, etc.)
- Written PhD thesis proposal, defended in an oral examination conducted by a panel of faculty members. The intention of this “qualifying examination” is to assess the student's ability and readiness to carry forward and successfully complete independent PhD-level research. This assessment is based on the student's graduate record to date, including graduate lecture courses and research performed, together with the presentation and defense of the proposed PhD thesis.
- 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.

Courses

Preparatory Courses
AST 1410H Stars
AST 1420H Galactic Structure and Dynamics
AST 1430H Cosmology
AST 1440H Radiation Processes and Gas Dynamics

Research Courses
AST 1500Y+ Directed Research
AST 1501Y Introduction to Research
AST 400*Y+ Research (*Students register each year, beginning in the second year, in sequence of the last digit: 2, 3, etc.)

Elective Courses
AST 2010H Physics of Stellar Atmospheres
AST 2020H Physics of Stellar Interiors
AST 2030H Interstellar Medium and Star Formation
AST 2040H Extragalactic Astronomy
AST 2050H Observational Techniques
AST 2060H General Relativity I: Theory
AST 2070H General Relativity II: Applications and Cosmology

Specialized Courses
AST 3010H Advanced Topics in Stellar and Galactic Astronomy I
AST 3011H Advanced Topics in Stellar and Galactic Astronomy II

Supplementary Research for PhD Students
AST 3500H Non-Thesis Research Project in Astronomy/Astrophysics

Graduate Faculty

Full Members
Roberto Abraham - BSc, DPhil
Pawel Artymowicz - MSc, PhD
Charles Bolton - BS, MS, PhD
J Richard Bond - BSc, MS, PhD, FRS, FRSC, OC, Fellow CIAR, Fellow APS, University Professor
Raymond Carlb erg - BSc, MS, PhD, Fellow CIFAR
William Clarke - BA, MA, PhD
Charles Dyer - BSc, MSc, PhD
Ray Jayawardhana - BSc, PhD, Canada Research Chair
Lev Kofman - MSc, PhD, Fellow CIAR
John Lester - BA, MS, PhD
Julian Lowman - BSc, MSc, PhD
Peter Martin - BSc, MSc, PhD, FRSC (Chair)
Christopher Matzner - AB, MA, PhD
Stefan Mochancki - BSc, MSc, PhD
Dae-Sik Moon - BSc, MSc, PhD
Norman Murray - BSc, PhD, Canada Research Chair
C. Barth Netterfield - BSc, PhD, Fellow CIFAR
Ue-Li Pen - BSc, MSc, PhD
John Percy - BSc, MA, PhD
Slavek Rucinski - BSc, PhD
Gopalan Srinivasan - BSc, MSc, PhD
Sabine Stanley - BSc Hon, PhD
John Dubinski - BSc, MA, PhD
Howard Yee - BASc, PhD, Canada Research Chair (Associate Chair, Graduate)

Members Emeriti
Christine Clement - BSc, MA, PhD
Maurice Clement - BSc, MSc, PhD
John Fernie - BSc, MSc, PhD, FRSC
Robert Garrison - BA, PhD
Ernest Seaquist - BASc, MA, PhD

Associate Members
John Dubinski - BSc, MSc, PhD
Biochemistry BCH

Faculty Affiliation
Medicine

Degree Programs Offered
Biochemistry - MSc, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Biomedical Engineering, see p. 418
   • Biochemistry, MSc, PhD
2. Biomolecular Structure, see p. 423
   • Biochemistry, PhD
3. Developmental Biology, see p. 433
   • Biochemistry, PhD
4. Genome Biology and Bioinformatics, see p. 448
   • Biochemistry, PhD
5. Neuroscience, see p. 466
   • 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 offers modern facilities for research leading to the MSc and PhD degrees in a wide variety of areas including the relationship between structure and biological function in proteins, nucleic acids, and lipids as well as complex multi-component systems such as membranes and subcellular organelles.

Contact and Address
Web: biochemistry.utoronto.ca
E-mail: biochemistry@utoronto.ca
Telephone: (416) 978-2702
Fax: (416) 946-8228

Department of Biochemistry
Room 5205, Medical Sciences Building
University of Toronto
Toronto, Ontario M5S 1A8
Canada

Degree Programs

Master of Science

Minimum Admission Requirements
• Normally, minimum B+ average in last two years of study in Honours/Specialist BSc program in Biochemistry/Molecular Biology. Students with strong academic credentials in Honours/Specialist programs in disciplines related to Biochemistry/Molecular Biology also considered.
• Applicant arranges for personal reference forms from three individuals familiar with academic performance.
• Applicants who obtained a degree outside Canada are generally required to have an MSc degree in biochemistry or in a closely related subject area and must arrange for general and biochemistry GRE examination results to be sent to the Department.
• Applicants from outside Canada whose primary language is not English and who graduated from a university where the language of instruction was not English must provide TOEFL (Test of English as a Foreign Language) and TWE (Essay Writing) scores.
  o Paper-based TOEFL: minimum 580 score and 5 on the TWE.
  o Computer-based TOEFL: minimum 237 score and 5 on the essay rating component.
  o Internet-based TOEFL: minimum 93/120 score and 22/30 on the writing and speaking sections.
  o In the absence of TOEFL results, an IELTS score of at least 7 is also acceptable.

Program Requirements
• Complete any courses that were a condition of acceptance
• Complete one session of BCH 2021H Selected Topics in Biochemistry
• Participate in BCH 2020Y Master’s Seminar Course in Biochemistry
• Thesis and successful completion of an oral examination on his or her 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.

Doctor of Philosophy

Minimum Admission Requirements
• Applicant arranges for personal reference forms from three individuals familiar with academic performance.
• Applicants who obtained a degree outside Canada are generally required to have an MSc degree in biochemistry or in a closely related subject area and

Courses which may continue over a program. The course is graded when completed.
must arrange for general and biochemistry GRE examination results to be sent to the Department.

- Applicants from outside Canada whose primary language is not English and who graduated from a university where the language of instruction was not English must provide TOEFL (Test of English as a Foreign Language) and TWE (Essay Writing) scores.
  - Paper-based TOEFL: minimum 580 score and 5 on the TWE.
  - Computer-based TOEFL: minimum 237 score and 5 on the essay rating component.
  - Internet-based TOEFL: minimum 93/120 score and 22/30 on the writing and speaking sections.
  - In the absence of TOEFL results, a MELAB score of at least 92 is also acceptable.

- Students accepted into the PhD program through one of three routes:
  1. via reclassification from the MSc program;
  2. on completion of an MSc degree in biochemistry or a cognate discipline;
  3. directly from a BSc if, in the opinion of the Biochemistry Graduate Committee, the student has an outstanding academic record.

- The latter two categories require the student to successfully complete a qualifying examination within the first 18 months.

Program Requirements

- Complete any courses that were a condition of acceptance.
- Complete 1.5 internal or external (from cognate departments) graduate-level courses, including at least one session of BCH 2021H Selected Topics in Biochemistry.
- Participate in BCH 2022Y+ Doctoral Seminar Course in Biochemistry.
- Submit a thesis and defend it at a School of Graduate Studies 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.

Courses

For course details and availability, consult the Department's Web site.

BCH 1371H Laboratory Course in Biochemistry (BCH 371)*

BCH 1422H Membrane Proteins: Structure and Function—Lectures (BCH 422H)*
BCH 1426H Regulation of Signalling Pathways—Lectures (BCH 426H)*
BCH 1440H Protein Biosynthesis—Lectures (BCH 440H)*
BCH 1441H Bioinformatics (BCH 441H)*
BCH 1471Y Advanced Biochemistry—Laboratory (BCH 471Y*—prerequisite is BCH 371* or equivalent)
BCH 2020Y Master's Seminar Course in Biochemistry (Credit/No Credit)
BCH 2021H Selected Topics in Biochemistry: Advanced lectures to supplement the above lower-numbered courses in Biochemistry
  - Fall 2008: Regulation of Cellular Processes by Post-translational Modification
  - Spring 2009: Recent Advances in Biomolecular Imaging
  - Fall 2009: Molecular Machines, Biosensors and Nanotechnology
  - Spring 2010: Protein Interactions: From Principles of Recognition to Drug Design
BCH 2022Y+ Doctoral Seminar Course in Biochemistry (Credit/No Credit)
JBB 1425H Structural Biology: Principles and Practice—Lectures (BCH 425H)*
JBB 2025H Protein Crystallography—Lectures
JBB 2026H Protein Structure, Folding and Design
JBI 1428H Molecular Immunology—Lectures (JBI 428H)*
JBL 1507H Biochemistry of Inherited Disease
JNP 1017H+ Molecular and Biochemical Basis of Toxicology
JNP 1018H+ Current Topics in Molecular and Biochemical Toxicology
JNR 1444Y Fundamentals of Neuroscience: Cellular and Molecular—Lectures (PSL 444Y)*
JTB 2010H Proteomics and Functional Genomics
JTB 2020H Applied Bioinformatics

Graduate Faculty

Full Members
Khosrow Adeli - BSc, MSc, PhD
Liliana Attisano - BSc, PhD, Canada Research Chair
Robert Baker - BSc, PhD
David Bazett-Jones - BSc, MSc, PhD
Christine Bear - BSc, MSc, PhD
Grant Brown - BSc, PhD
John Callahan - BSc, MSc, PhD
Avijit Chakrabarty - BSc, MSc, PhD
Hue Sun Chan - BSc, MA, PhD, Canada Research Chair
David Clarke - PhD
Alan Richard Davidson - BSc, PhD
Charles Deber - BSc, PhD
Julie Forman-Kay - BSc, PhD
John Glover - BSc, MSc, PhD

Biochemistry 105
Degree Programs

Sergio Grinstein - BBcBio, DSc, FRSC, Pitblado Chair in Cell Biology
Walid Houry - BSc, MSc, PhD
Lynne Howell - BSc, PhD
C James Ingles - BSc, PhD
David Isenman - BSc, PhD
Annelise Jorgensen - MSc, PhD
Lewis Kay - BSc, PhD, Canada Research Chair
Frederick Keeley - BSc, PhD
Amira Klip - MSc, PhD, FRSC
Peter Lewis - BSc, PhD
Clifford Lingwood - BSc, PhD
Gergely Lukacs - MD, PhD
David Maclellan - BSc, MSc, PhD, FRSC, FRS, University Professor
Morris Manolson - BS, PhD
Angus McQuibban - BSc, MSc, PhD
Laurence Moran - BSc, PhD
Emil Pai - DrRenNat, Canada Research Chair
John Parkinson - PhD, BSc
Regis Pomes - BEng, PhD, Canada Research Chair
Gil Prive - BSc, PhD
David Pulleyblank - BSc, PhD
Margaret Rand - BSc, PhD
Reinhart Reithmeier - BSc, PhD (Chair)
James Rini - BSc, PhD (Coordinator of Graduate Studies)
Brian Robinson - BSc, PhD, Canada Research Chair
Daniela Rotin - BSc, MSc, PhD
John Rubinstein - BSc, PhD
John L Rubinstein
Jacqueline Segall - BSc, PhD
Simon J Sharpe - BSc, PhD
Chi-Hung Siu - PhD
Craig Smibert - BSc, PhD
Igor Stagljar - BSc, PhD
Boris Steipe - MD, PhD
William Trimble - BSc, PhD, Canada Research Chair
Allen Volchuk - BSc, PhD, Canada Research Chair
David Williams - BSc, MSc, PhD
Shoshana Wodak - PhD
Christopher Yip - BASc, MSc, PhD, PEng, Canada Research Chair

Members Emeriti
Rashid Anwar - BSc, MSc, PhD
Anders Bennick - MSc, DDS, PhD, DipPerio
James Gurd - BA, PhD
Byron Lane - BA PhD
Alexander Marks - MD, PhD
Mario Moscarello - BA, MD, PhD
Robert Murray - MD, BSc, MSc, PhD
Marian Packham - PhD, University Professor
Robert Painter - BSc, PhD
Bibudhendra Sarkar - BPharm, MPharm, PhD
Harry Schachter - BA, MD, PhD, FRSC
George Williams - BSc, Dr Science
Biomedical Engineering  BME

Faculty Affiliation
Applied Science and Engineering

Degree Programs Offered
Biomedical Engineering - MASc, PhD
Clinical Biomedical Engineering – MHSc

Collaborative Programs Offered
Degree programs that participate in:
1. Addiction Studies, see p. 406
   • Biomedical Engineering, MASc, PhD
2. Cardiovascular Sciences, see p. 426
   • Biomedical Engineering, MASc, PhD
3. Genome Biology and Bioinformatics, see p. 448
   • Biomedical Engineering, PhD
4. Health Care, Technology and Place, see p. 454
   • Biomedical Engineering, PhD
5. Neuroscience, see p. 466
   • Biomedical Engineering, MASc, PhD

Overview
The Institute of Biomaterials and Biomedical Engineering offers facilities for research in biomedical engineering and for three educational programs leading to master's and doctoral degrees. Students may be registered in the Biomedical Engineering Program or in the Clinical Biomedical Engineering Program through the Institute. Students interested in the Collaborative Program in Biomedical Engineering may register through one of the collaborating graduate units.

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.

Research themes include diagnostic and therapeutic engineering, technology for health, and cellular and molecular bioengineering. Specific interests include neural and sensory systems engineering, molecular imaging, nanotechnology and microtechnology, biomaterials, rehabilitation engineering, cellular and tissue engineering, regenerative medicine proteomics and bioinformatics.

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Toronto, Ontario M5S 3G9
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Degree Programs

Biomedical Engineering

Master of Applied Science

Minimum Admission Requirements
- Graduate in dentistry, engineering, medicine, or one of the physical or biological sciences

Program Requirements
- Program normally comprises at least 2.0 full-course equivalents (FCE), including BME 1450H and an appropriate life science or engineering course. Engineering and physical science students take a life sciences course, such as JPB 1022H (or an equivalent); while life science students take a physical sciences course, such as JPB 1055H (or an equivalent).
- Students participate in two seminar courses: one of BME 1010H or BME 1011H Graduate Seminar series, and JDE 1000H Ethics in Research.
- Successful completion of a thesis in the biomedical engineering field.
- Students normally complete all degree requirements within 18-24 months.

Doctor of Philosophy

Minimum Admission Requirements
- Graduate in dentistry, engineering, medicine, or one of the physical or biological sciences with an appropriate master's degree.
- Direct admission may be considered in exceptional cases.

Program Requirements
- Normally at least 1.0 full-course equivalent (FCE) and successful completion of a thesis, representing an original investigation in biomedical engineering.
- Within 12 months of registration, students must pass a qualifying examination covering the broad
Degree Programs

- 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 University of Toronto Final Oral Examination.

- Engineering and physical science students are required to take a life sciences course, such as JPB 1022H (or an equivalent); while life science students are required to take a physical sciences course, such as JPB 1055H (or an equivalent).

- Students pursue a thesis topic relevant to Biomedical Engineering and are expected to take BME 1450H Bioengineering Science.

- Students participate in two seminar courses: one of BME 1010H or BME 1011H Graduate Seminar series, and JDE 1000H Ethics in Research.

Clinical Biomedical Engineering

Master of Health Science

- Selected students who hold the degree of Bachelor of Applied Science of this University or an equivalent degree in engineering.

Program Requirements

- Normally 4.0 full-course equivalents (FCE), including 1.0 FCE which involves periods of internships in health care facilities, the medical device industry, or health care consulting firms. All students are required to take a life sciences course, such as JPB 1022H (or an equivalent).

- Students participate in two seminar courses: one of BME 1010H or BME 1011H Graduate Seminar series, and JDE 1000H Ethics in Research.

- A thesis research project.

- All degree requirements must be completed within three years.

Courses

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

BME 1010H Graduate Seminar
BME 1011H Graduate Seminar
BME 1405H Clinical Engineering Instrumentation I
BME 1430H Mathematical Theory of Tracer Kinetics
BME 1436H Clinical Engineering Surgery

BME 1439H Clinical Engineering Instrumentation II
BME 1445H Special Topics in Clinical Engineering
BME 1446H Transduction of Physiological Events
BME 1450H Bioengineering Science
BME 1452H Signal Processing for Bioengineering
BME 1453H Cell and Tissue Engineering
BME 1454H Regenerative Medicine: Fundamentals and Applications
BME 1456H Changing Health Care Technologies, People, and Places
BME 1457H Biomedical Nanotechnology
BME 1458H Pattern Discovery Methods for Biomedical Engineering
BME 1459H Protein Engineering
BME 4444Y Practice in Clinical Engineering
JCB 1349H Molecular Assemblies: Structure/Function/Properties
JEB 1365H Ultrasound: Theory and Applications in Biology and Medicine
JEB 1375H Practical Optimization
JEB 1433H Medical Imaging
JEB 1444H Neural Engineering
JEB 1447H Sensory Communications
JEB 1451H Neural Bioelectricity
JPB 1022H Human Physiology as Related to Biomedical Engineering
JPB 1055H Bioengineering for Life Scientists
JTC 1331H Biomaterials Science
MBP 1007H Fundamentals in Molecular and Cell Biology I
MBP 1008H Fundamentals in Molecular and Cell Biology II
MBP 1022H Advanced Cell Biology for Physical Scientists
PSL 1052H Fundamentals of Ion Channel Function
ZOO 1002H Advanced Research and Reading Course
HAD 5010H Canada’s Health System and Health Policy: Part I

Graduate Faculty

Full Members
Susan Adamson - BSc, MSc, PhD
Cristina Amon - BSc, MS, ScD
Jane Aubin - BSc, PhD
Julie Audet - MSc, PhD
Berj Bardakjian - BSc, BEd, MASc, PhD, PEng
Earl Bogoch - BA, MSc, MD, PhD
Christopher Caldarone
Warren Chan - BSc, PhD
Tom Chau - BASc, MASc, PhD, PEng
Yu-Ling Cheng - SB, SM, PhD
David Courtman - BSc, MSc, PhD
John Davies - BSc, PhD, BDS, DSc
Anthony Easty - BSc, PhD, PEng, CCE
Moshe Eizenman - BASc, MASc, PhD
C Ross Ethier - BSc, MMath, SM, PhD, PEng
Geoffrey Fernie - BSc, PhD, PEng, CCE
Richard Frecker - BSc, MD, PhD, LMCC
Degree Programs

Allan Gross - PhD, MD
Marc Grynpas - MSc, PhD
Robert Harrison - BSc, PhD, DSc
K. Wayne Johnston - MD, FRCS(C), FRCP(C)
Michael Joy - BSc, MASc, PhD, PEng
Rita Kandel - MD, FRCP(C)
Shafique Keshavjee - MSc, MD, FRCS(C)
Antoine Khoury - MB, BCH
Ofer Levi - PhD, MSc, BSc
Morris Milner - BSc, PhD
Kenneth Norwicht - BSc, MSc, MD, PhD
Milos Popovic - MSc, MASc, PhD
Kenneth Pritzker - BSc, MD, FRCP(C)
Milica Radisic - PhD, BEng
Denise Reid - BSc(OT), MEd, PhD
Jonathan Rocheleau
Paul Santerre - BSc, MScEng, PhD
Michael Sefton - BASc, ScD, FCIC, PEng, University Professor
Molly Shoichet - BSc, MSc, PhD, Canada Research Chair
Melvin Silverman - BSc, MDCH, FRCP(C)
Frances Skinner - BMath, MASc, PhD
Arthur Slutsky - BASc, MASc, MD, PhD
William Stanford - PhD, BA (Associate Chair & Coordinator of Graduate Studies)
Bradley Strauss - MD
Steven Thorpe - BASc, MASc, PhD
Kien (Kevin) Truong - BASc, PhD
Paul Wang - BSc, PhD
Christopher Yip - BASc, MSc, PhD, PEng, Canada Research Chair
Peter Zandstra - BEng, PhD, PEng, Canada Research Chair

Members Emeriti
Richard Cobbold - BSc, MSc, PhD, FRSC
Alf Dolan - BSc, MSc
Hans Kunov - MSc, PhD, PEng
Robert Pilliar - BASc, PhD, PEng
Philip Watson - DDS, MScD

Associate Members
Cynthia Gemmell - PhD, MD
David Howarth - PhD
Howard Michaels - BASc, MSc, PhD
Rana Sodhi - BSc, MSc, PhD
David Wells
James Winslow - PhD
Kimberly Ann Woodhouse - BEng, PhD, PEng
Degree Programs

Cell and Systems Biology  CSB

Faculty Affiliation
Arts and Science

Degree Programs Offered
Cell and Systems Biology  – MSc, PhD

Collaborative Programs Offered
Cell and Systems Biology degree programs that participate in the following collaborative programs:
1. Developmental Biology, see p. 433
   • Cell and Systems Biology, PhD
2. Genome Biology and Bioinformatics, see p. 448
   • Cell and Systems Biology, PhD
3. Neuroscience, see p. 466
   • Cell and Systems Biology, MSc, PhD

Overview
Cell and Systems Biology (CSB) offers a master’s program leading to the degree of Master of Science and a doctoral program leading to the degree of Doctor of Philosophy in the fields of Cell, Molecular, and Systems Biology. Students undertaking graduate programs in CSB 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.

Contact and Address
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Degree Programs

Master of Science

Minimum Admission Requirements
• School of Graduate Studies general admission requirements.
• Minimum equivalent of a University of Toronto B+ average in the last year of an honours BSc program, plus a minimum mid-B overall average in the previous year 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 facility in the English language through the successful completion of one of the following English language proficiency tests:
  o Test of English as a Foreign Language (TOEFL) with the following minimum scores:
    o paper-based TOEFL exam: 580 and 5 on the Test of Written English (TWE)
    o computer-based TOEFL exam: 237 and 5 on the essay writing component
    o internet-based TOEFL exam: 93/120 and 22/30 on the writing and speaking sections.
  o International English Language Testing System (IELTS): minimum score of 7.0.
  o The Certificate of Proficiency in English (COPE): minimum score of 4, with at least 1 in each component, and 2 in the writing component.

Program Requirements
• The MSc program is normally completed within 24 months (6 sessions).
• Complete 0.5 CSB full-course equivalent.
• Attend MSc seminar series (credit only, 24 seminars per year, plus attendance at two CSB PhD Proposal/Transfer Days per year).
• Complete thesis based on a research project.
• Give public presentation of thesis research and defend the thesis at an oral examination.

Doctor of Philosophy

Minimum Admission Requirements
• PhD degree students are generally accepted by one of three routes:
  o following completion of an appropriate University of Toronto MSc degree, or its equivalent from a recognized university, with a minimum A- average in all work completed in the master’s program,
  o by transferring from the MSc program: Students may reclassify from the MSc program after 12 months of study,
  o by direct entry, that is, after completing an honours BSc program with an exceptional record with a minimum University of Toronto A– average or equivalent.
Applicants whose primary language is not English, and who graduated from a university where the language of instruction 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) with the following minimum scores:
  - paper-based TOEFL exam: 580 and 5 on the Test of Written English (TWE)
  - computer-based TOEFL exam: 237 and 5 on the essay writing component
  - internet-based TOEFL exam: 93/120 and 22/30 on the writing and speaking sections.

- International English Language Testing System (IELTS): minimum score of 7.0.

- The Certificate of Proficiency in English (COPE): minimum score of 4, with at least 1 in each component, and 2 in the writing component.

Program Requirements

- Complete 1.0 CSB full-course equivalent (FCE)
- Attend the CSB PhD seminar series (credit only, 24 seminars per year, plus attendance at two CSB PhD Proposal/Transfer Days per year).
- Complete a thesis on a research project, give a public presentation of the thesis research, and defend the thesis at the final oral examination.
- Students who have completed a MSc degree are expected to complete the PhD program within 4 years.
- Students transferring from the MSc program are expected to complete the PhD program within 5 years from the start date of enrolment in the MSc program. All PhD students (including MSc students wishing to reclassify as PhD students) must successfully complete a PhD Proposal/Transfer Examination. Students who transfer from the CSB MSc program to the PhD program may apply course credits earned as CSB MSc students toward their PhD course requirements.
- Direct-entry students from a BSc program are expected to complete the PhD program within 5 years.

Courses

Detailed information on courses can be found on the Department of Cell and Systems Biology Web site.

Graduate Faculty

Full Members

- Mounir AbouHaidar - BSc, PhD, Dip d E Sup, CAP
- James Anderson - BA, PhD
- F Michael Barrett - BSc, MSc, PhD
- Thomas Berleth - PhD
- Rudy Boonstra - BSc, PhD
- Ian Brown - BSc, PhD, Canada Research Chair
- Ashley Bruce - BA, PhD
- Leslie Buck - BSc, PhD
- Malcolm Campbell - BSc, MSc, PhD (Associate Chair, Graduate Studies)
- Belinda Chang - BA, PhD, Canada Research Chair
- Dinesh Christendat - BSc, PhD
- John Coleman - BSc, PhD
- Asher Cutter - PhD, Canada Research Chair
- Darrell Desveaux - BSc, MSc, PhD
- Elizabeth Edwards - BEng, MEng, PhD, PEng
- George Espie - PhD
- James Fullard - BSc, MSc, PhD
- Roberta Fulthorpe - BSc, MSc, PhD
- Dorothea Godt - MSc, PhD
- Daphne Goring - BSc, MSc, PhD, Canada Research Chair (Chair)
- David Guttmann - BS, PhD, Canada Research Chair
- Tony Harris - BSc, PhD, Canada Research Chair
- Rene Harrison - BSc, MSc, PhD
- Clare Hasenkampf - BSc, MSC, PhD
- Paul Horgen - BA, MS, PhD
- Linda Kohn - BS, PhD
- Herbert Kronzucker - BSc, PhD, Canada Research Chair
- Angela Lange - BSc, PhD
- Ellen Larsen - BSc, MSc, PhD
- Joel Levine - BA, PhD, Canada Research Chair
- David Lovejoy - BSc, PhD
- Nathan Richard Lovejoy - BSc, MSc, PhD
- Andrew Mason - BSc, MSc, PhD
- Emma Master - BSc, PhD
- Peter McCourt - PhD, NSERC Performance Plants Chair in Plant Genetics, Canada Research Chair
- Jean-Marc Moncalvo - BSc, MSc, PhD
- Joanne Nash - BSc, MSc, PhD
- Danton O’Day - BSc, MSc, PhD
- Ian Orchard - BSc, PhD, DSc
- John Peever - BSc, MSc, PhD
- Nicholas Provart - BSc, MSc, PhD
- Stephen Reid - BA, PhD
- Charles Riggs - BSc, PhD
- Maurice Ringuette - BSc, PhD
- Patricia Romans - BSc, MSc, PhD
- J.J. Berry Smith - BA, MA, PhD
- Marla Sokolowski - BSc, PhD, FRSC, Canada Research Chair
- Richard Stephenson - BSc, PhD
- Bryan Stewart - BSc, MSc, PhD, Canada Research Chair
- John Stinchcombe - BA, PhD
- Ulrich Tepass - MSc, PhD, CIHR Investigator
- Stephen Tobe - BSc, MSc, PhD, FRSC
- Vince Tropepe - BSc, PhD
- Greg Vanlerberghe - BSc, MSc, PhD
Degree Programs

Susannah Varmuza - BSc, MSc, PhD
J. Timothy Westwood - BSc, MSc, PhD
Rudolf Winklbauer - DipBiol, PhD
Melanie Woodin - BSc, MSc, PhD
John Yeomans - BA, PhD
Keiko Yoshioka - BA, MS, PhD

Members Emeriti
Sherwin Desser - BSc, MSc, PhD
Nicholas Mrosovsky - BA, PhD
John Youson - BA, MSc, PhD

Associate Members
Michelle Marie Aarts - BSc, MSc, PhD, Canada Research Chair
Sonia Gazzarrini - BSc, MSc, PhD
Alan Moses - BSc, MSc, PhD
Leigh Revers - PhD
Mauricio Terebiznik - BSc, PhD
Degree Programs

Chemical Engineering and Applied Chemistry  CHE

Faculty Affiliation
Applied Science and Engineering

Degree Programs Offered
Chemical Engineering and Applied Chemistry, MASc, MEng, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Biomedical Engineering, see p. 418
   • Chemical Engineering and Applied Chemistry, MASc, PhD
2. Environmental Engineering, see p. 441
   • Chemical Engineering and Applied Chemistry, MASc, MEng, PhD
3. Environmental Studies, see p. 443
   • Chemical Engineering and Applied Chemistry, MASc, MEng, PhD
4. Genome Biology and Bioinformatics, see p. 448
   • 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. Graduate programs lead to the degrees of Master of Applied Science (MASc), Master of Engineering (MEng), and Doctor of Philosophy (PhD). 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 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:
1. Biomolecular and Biomedical Engineering
2. Bioprocess Engineering
3. Chemical and Materials Process Engineering (pending approval)
4. Engineering Informatics
5. Environmental Science and Engineering
6. Pulp and Paper
7. Surface and Interface Engineering
8. Sustainable Energy
A more complete and up-to-date description of graduate research programs and enrolment procedures appears on www.chem-eng.utoronto.ca.

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Degree Programs
Master of Applied Science

Minimum Admission Requirements
• Four-year undergraduate degree in engineering or physical/chemical/biological sciences from a recognized university.
• A minimum grade equivalent to a University of Toronto B+ (78%) average in each of the final two years of study.
• A faculty member who is willing to supervise the student.

Program Requirements
• Thesis on a research topic.
• At least three graduate courses, one of which normally must be selected from Category A (see courses below), and at least one of which must be selected in an area outside the student's field of research specialization. Furthermore, only one 500-level course may be taken for credit towards the degree program. Students are also required to complete CHE 2222H, CHE 3000Y, and JDE 1000H.
• Each candidate should discuss possible research projects with several members of the Department before selecting a research area and a supervisor.
• The program requires a minimum full-time residence of two sessions (8 months).
• The degree program is typically completed in 1.5 years, but must be completed within three calendar years.
Degree Programs

Master of Engineering

Minimum Admission Requirements
- Four-year undergraduate degree in engineering or its equivalent from a recognized university, with a minimum B+ average in the final two years.

Program Requirements
- The program normally requires completion of a total of 5.0 full-course equivalents (FCE) or 3.5 FCE plus a 1.5 FCE project supervised by a faculty member. The project must be defended at an oral examination.
- There is no minimum period of residency. The MEng program can be completed either through full-time or part-time studies. The full-time program is designed to be completed within 12 months, including the summer session. The part-time program is intended primarily for engineers in full-time professional practice; the degree must be completed within six calendar years.

Doctor of Philosophy

Minimum Admission Requirements
- A faculty member who is willing to supervise the student.
- Applicants may enter the program via one of three routes:
  1. following completion of the MASc program with a minimum B+ average and exceptional all-round scientific and intellectual ability as evidenced from theoretical or experimental research, academic standing, initiative, and publication record.
  2. transferring from the MASc program after one year. Such students must first complete 1.5 full-course equivalents (FCE) and earn an A- average as well as successfully complete a "bypass" examination.
  3. direct entry after completing a bachelor’s degree, may also be considered in certain cases.
- International applicants with a master's degree in their country of residence may be asked to register in the MASc program and follow entry route 2.

Program Requirements
- Thesis on a research topic.
- Students with completed MASc degree: at least 2.0 full-course equivalents (FCE).
- Transfer students: 3.0 FCE for students without a master's degree 2.0 FCE for students with a completed master's degree. Transfer students do not have to take a separate PhD qualifying examination.
- Direct-entry students: at least 3.0 FCE.
- 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 minor area of study. It is recommended that one of these courses should be selected from Category A courses. Normally, PhD students are not allowed to take a 500-level course for credit towards the degree program. Students are also required to complete CHE 3000Y and, if not already completed, CHE 2222H and JDE 1000H.
- Within 9 to 12 months of starting the PhD program, students must pass a qualifying examination. Students normally remain in residence (full time, on campus) until the departmental recommendation for the Final Oral Examination is made, unless special permission to do so has otherwise been granted by the Departmental Graduate Studies Committee.

Courses
A course schedule is available on the departmental Web site at the beginning of each session listing the time and room location for each course. Not all courses are given every year.

Students in the MASc and PhD programs are required to take CHE 3000Y Seminars in Chemical Engineering and Applied Chemistry in each session of full-time registration. All students wishing to undertake research and teaching in the Department of Chemical Engineering and Applied Chemistry must successfully complete a two-day intensive occupational health and safety training workshop, CHE 2222H 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 WHMIS refresher workshop. Students registered in a graduate degree program involving research are required to participate in the non-credit seminar course JDE 1000H Ethics in Research during their first or second session of registration.

Category A
CHE 1107H Applied Mathematics
CHE 1140H Topics in Process Identification and Control
CHE 1141H Advanced Chemical Reaction Engineering
CHE 1142H Applied Chemical Thermodynamics
CHE 1143H Transport Phenomena
CHE 1144H Separation Processes
CHE 1147H Data Mining in Engineering
CHE 1149H Electrolyte Thermodynamics
JTC 1135H Applied Surface Chemistry
CHE 1180H Advanced Topics in Chemical Engineering
CHE 1310H Chemical Properties of Polymers
JCI 1503H Advanced Topics in Computing and Information Systems
CHE 2504H Industrial Pollution Prevention

Category B
CHE 1118H Industrial Catalysis
CHE 1134H Advances in Bioengineering
CHE 1213H Corrosion
CHE 1314H The Structure and Properties of Fibrous Materials
JTC 1029H Ceramics
JTC 1331H Biomaterials Science
JCB 1349H Molecular Assemblies: Structure/Function/Properties
CHE 1400H Environmental Nuclear Science
CHE 1533H Nuclear Chemical Engineering
CHE 1541H Two-Phase Flow and Heat Transfer
JCC 1311H Environmental Microbiology
JNC 2503H Environmental Pathways

Engineering Management Courses
APS 501H Leadership and Leading in Groups and Organizations
APS 1001H Project Management
APS 1003H Financial Engineering
APS 1004H Human Resource Management - An Engineering Perspective
APS 1005H Operations Research for Engineering Management
APS 1088H Entrepreneurship and Business for Engineers
APS 1201H Topics in Engineering and Public Policy

500-level (undergraduate/graduate) Courses
CHE 507H Process Modelling and Simulation
CHE 553H Electrochemistry
CHE 564H Pulp and Paper Processes
CHE 565H Aqueous Process Engineering
CHE 568H Nuclear Engineering
CHE 575H Mechanical Properties of Bio-Composites and Biomaterials

Seminar Courses
CHE 1211H Pulp and Paper Seminars (Credit/No Credit)
CHE 2011H Graduate Student Seminars (Credit/No Credit)
CHE 3000Y Seminars in Chemical Engineering and Applied Chemistry (Credit/No Credit)

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.

Graduate Faculty

Full Members
Edgar Joel Acosta - BS, MS, PhD
D Grant Allen - BASc, MASc, PhD, PEng
Julie Audet - MASc, PhD
Timothy Bender - BSc, PhD, MCIC, MACS
Warren Chan - BSc, PhD
Yu-Ling Cheng - SB, SM, PhD
William Cluett - BSc, PhD, FCIC, PEng
Paul Cooper - BScF, MSc, BEd, PhD, Value-Added Wood and Composite Products Chair
Donald Cormack - BASc, MASc, PhD, FCIC, PEng
Thomas Coyle - BSc, BA, ScD
John Davies - BSc, PhD, BDS, DSc
Miriam Diamond - MSc, PhD
Levente Diosady - BASc, MASc, PhD, FCIC, PEng
Elizabeth Edwards - BEng, MEng, PhD, PEng
Gregory Evans - BASc, MASc, PhD, PEng
Ramin Farnoud - BASc, MASc, PhD
Roberta Fulthorpe - BSc, MSc, PhD
Marc Grynpas - MSc, PhD
Charles Jia - BEng, MEng, PhD, PEng
Masahiro Kawaji - BASc, MSc, PhD, PEng (Acting Chair, July 1 to December 31, 2008)
Donald Kirk - BASc, MASc, PhD, PEng
Mark Kortschot - BASc, MASc, PhD, PEng
Eugenia Kumacheva - BS, MSc, PhD
Yuri Lawryshyn - BASc, MASc, PhD, PEng
Radhakrishnan Mahadevan - BTech, PhD
Emma Master - BSc, PhD
Charles Mims - BS, PhD
Roger Charles Newman - BA, PhD, DSc
Vladimiro Papangelakis - DiplEng, MEng, PhD
Milica Radisic - PhD, BEng
Douglas Reeve - BSc, MASc, PhD, PEng, FCIC, FTAPPI, FIAWS, DTech
Mohini Sain - BSc, BASc, MTech, PhD, PEng
Paul Santerre - BSc, MScEng, PhD
Bradley Saville - BSc, PhD, PEng
Michael Selton - BASc, ScD, FCIC, PEng, University Professor
Molly Shoichet - BSc, MSc, PhD, Canada Research Chair
William Stanford - PhD, BA
Murray Thomson - BEng, MSc, PhD, PEng
Steven Thorpe - BASc, MASc, PhD
Hongti Tran - BSc, MEng, PhD, FTappi, Frank Dottori Chair in Pulp and Paper Engineering
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Ning Yan - BSc, PhD, PENG
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Peter Zandstra - BEng, PhD, PEng, Canada Research Chair

Members Emeriti
Stephen Balke - BEng, PhD, PEng
David Boocock - BSc, PhD, ARSC, DIC, FCIC
Charles Chaffey - BSc, PhD, PEng, CChem
Michael Charles - BSc, MSc, PhD, FCIC, FCAE, PEng
Frank Foulkes - BASc, MASc, PhD, PEng
David James - BSc, MA, MSc, PhD, PEng
Robert Jervis - BA, MA, PhD, FRSc, FCIC, FCNS, FCSCA, FIAFS, PEng
Rein Luus - BASc, MASc, AM, PhD, FCIC, PEng
Donald Mackay - BSc, ARCST, PhD, FCIC, PEng
Joseph Paradi - BASc, MASc, PhD, FCAE, PEng
Mary Phillips - BASc, MA, PhD, FCIC, PEng
James Smith - BASc, MASc, PhD, DIC, FCIC, CIH, PEng
Olev Trass - BSE, ScD, FCIC, PEng

Associate Members
Harry Beller - BA, MS, PhD
Terry Bidleman - BSc, PhD
Jeffrey Brook - BSc, MS, PhD
Degree Programs

Sunling Gong - BASc, MASc (Chinese Acad of Sci), MASc, PhD
Howard Goodfellow - BASc, MASc, PhD, PEng
Thomas Michael Grace - BASc, MASc, PhD
Andrew Kevin Jones - BASc, MASc, PhD
Ted Kotschorek
David Kuhn - BSc, MSc, PhD, PEng
Steven Liss - BSc (Hon), MSc, PhD
Bruce Lyne - BSc, PhD, MBA
David Major - BSc, MSc, PhD
Ted Mao - BASc, MASc, PhD, PEng
Bruce Mckague - BSc, PhD
Sean O’Dea - BA
Matadial Ojha - BSc, MSc, PhD
Olatokunboh Oshinowo - BASc, MASc, PhD, PEng
Syed Rizvi - BS, MS, MEng, PhD
Saed Sayad - MD, PhD
William Smith - BASc, MASc, MSc, PhD, PEng
Rana Sodhi - BSc, MSc, PhD
Trevor Stuthridge - BSc, MSc, DPhil
Paul Szabo - BEng, MEng, PEng, FCAE
Peter Tremaine - BSc, PhD, FCIC
Stephen Woo - BEng, MASc, PhD
Kimberly Ann Woodhouse - BEng, PhD, PEng
Degree Programs

Chemistry

Faculty Affiliation
Arts and Science

Degree Programs
Chemistry, MSc, PhD

Overview
Modern facilities are available for research leading to the Master of Science and Doctor of Philosophy degrees. 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.

Collaborative Programs
Degree programs that participate in:
1. Biomolecular Structure, see p. 423
   • Chemistry, PhD
2. Environmental Studies, see p. 443
   • Chemistry, MSc, PhD

Contact and Address
Web: www.chem.utoronto.ca
E-mail: grad@chem.utoronto.ca
Telephone: (416) 978-3605
Fax: (416) 978-1631

Department of Chemistry
Room 153, Lash Miller Building
80 St. George Street
University of Toronto
Toronto, Ontario M5S 3H6
Canada

Degree Programs

Master of Science

Minimum Admission Requirements
• Appropriate four-year University of Toronto bachelor's degree, or its equivalent from a recognized university, with an average of at least B+.

Program Requirements
• Submission of a thesis, the successful completion of 1.0 graduate full-course equivalent (FCE), and participation in a seminar program.

Doctor of Philosophy

Minimum Admission Requirements
• Appropriate University of Toronto master's degree, or its equivalent from a recognized university, with a minimum B+ average.
• An exceptional student with an appropriate BSc degree with A- or better in courses relevant to the discipline may be admitted directly to the PhD program. Alternatively, transfer to the PhD program may be considered after a one-year MSc residency period.

Program Requirements
• The main requirement for the PhD program is the execution of an original investigation that is presented in a thesis. Each program requires successful completion of an oral examination in the area of the major field, as well as participation in a seminar program.
• Students select one of the following as a major field:
  o Analytical Chemistry
  o Environmental Chemistry
  o Inorganic Chemistry
  o Organic Chemistry
  o Experimental Physical Chemistry
  o Theoretical Physical Chemistry
  o Polymer and Materials Chemistry

Combinations within these subdisciplines, or with other disciplines, are permitted under the category of an interdisciplinary program. With the exception of Theoretical Physical Chemistry, each program requires a minimum of 2.0 full-course equivalents (FCE) from approved graduate courses offered in the School of Graduate Studies. Up to 1.0 FCE taken for credit in the master's program may be used to partially fulfil the PhD requirements. For details about the specific requirements for the major fields, visit the Web site www.chem.utoronto.ca

Courses
Not all courses are offered every year. Please consult the Department each session as to course availability.

Analytical Chemistry
CHM 1102H Bionsensors and Chemical Sensors
CHM 1103H Advanced Topics in Analytical Chemistry
CHM 1104H Separation Science
CHM 1105H Separations, Chromatography, and Microfluidics
CHM 1106H Instrumentation for Chemists
CHM 1150H Advances in Electroanalytical Chemistry and Electrochemical Sensors
CHM 1152H Chemical Sensors
CHM 1157H Applications of Chemometrics
CHM 1190Y Analytical Chemistry Seminar (Credit/No Credit)
CHM 2014H Research in Analytical Chemistry
BME 1452H Signal Processing for Bioengineering
CHE 1144H Separation Processes
ENV 1410H Analytical Environmental Chemistry
PHY 1406H Microprocessor Interfacing Techniques
### Environmental Chemistry
- CHM 1401H: Transport and Fate of Chemical Species in the Environment (core course)
- CHM 1404H: Molecular Analysis of Natural Systems
- CHM 1420H: Environmental Chemistry of Soil
- CHM 1425H: Modelling the Fate of Organic Chemicals in The Environment
- CHM 1430H: Advanced Topics in Atmospheric Chemistry
- CHM 1455H: NMR Spectroscopy I: Introduction to Theory and Application
- CHM 1456H: NMR Spectroscopy II: Advanced Theory and Application

### Inorganic Chemistry
- CHM 1204H: Organometallic Chemistry
- CHM 1205H: Inorganic Reaction Mechanisms
- CHM 1206H: Solid State Chemistry: Structure-Property Relations
- CHM 1209H: Structural Methods in Inorganic Chemistry
- CHM 1258H: Reactions of Coordinated Ligands
- CHM 1261H: Topics in Inorganic Chemistry I (core course)
- CHM 1263H: Bio-inorganic Chemistry
- CHM 1268H: X-Ray Crystallography
- CHM 1269H: Nanochemistry: A Chemistry Approach to Nanomaterials
- CHM 1270H: Frontiers in Inorganic Chemistry (core course)
- CHM 1290Y: Inorganic Chemistry Seminar (Credit/No Credit)
- CHM 2034H: Research in Inorganic Chemistry

### Organic Chemistry
- CHM 1003H: Physical Organic Chemistry II
- CHM 1004H: Synthetic Organic Chemistry
- CHM 1005H: Applications of Spectroscopy in Organic Structure Determination
- CHM 1006H: Bioorganic Chemistry
- CHM 1008H: Biological Chemistry
- CHM 1040H: Modern Organic Synthesis
- CHM 1045H: Modern Physical Organic Chemistry
- CHM 1054H: Topics in Bioorganic Chemistry
- CHM 1055Y: Organic Chemistry Proposal Writing
- CHM 1060H: Advanced Topics in Synthetic Organic Chemistry
- CHM 1068H: Topics in Biological and Medicinal Chemistry
- CHM 1090Y: Organic Chemistry Seminar (Credit/No Credit)
- CHM 2044H: Research in Organic Chemistry
- JRX 1124H: Structured-Based Drug Design

### Physical and Theoretical Chemistry
- CHM 1441H: Mathematical Methods
- CHM 1442H: Current Directions in Experimental Physical Chemistry
- CHM 1443H: Intermediate Quantum Mechanics
- CHM 1444H: Statistical Mechanics of Condensed Phases
- CHM 1445H: Coherent Control of Molecular Processes
- CHM 1446H: Quantum Computation and Information Theory
- CHM 1447H: Biophysical Chemistry
- CHM 1448H: Modelling of Biochemical Systems
- CHM 1455H: NMR Spectroscopy I: Introduction to Theory and Application
- CHM 1456H: NMR Spectroscopy II: Advanced Theory and Application
- CHM 1458H: Topics in Reaction Kinetics I
- CHM 1464H: Topics in Statistical Mechanics
- CHM 1476H: Modern Topics in Statistical Mechanics
- CHM 1478H: Quantum Mechanics for Physical Chemists (core course)
- CHM 1479H: Thermodynamics (core course)
- CHM 1480H: Basic Statistical Mechanics (core course)
- CHM 1481H: Reaction Kinetics and Dynamics (core course)
- CHM 1483H: Group Theory and Quantum Mechanics
- CHM 1485H: Molecular Dynamics and Chemical Dynamics in Liquids
- CHM 1486H: Modern Molecular Spectroscopy
- CHM 1487H: Modern Topics in Colloid Chemistry
- CHM 1488H: Advanced Experimental Methods in Physical Sciences
- CHM 1490Y: Physical Chemistry Seminar (Credit/No Credit)
- CHM 2024H: Research in Physical Chemistry

### Polymer and Materials Chemistry
- CHM 1301H: Organic and Inorganic Polymer Synthesis (core course)
- CHM 1302H: Physical Chemistry of Polymers (core course)
- CHM 1310H: Polymer Chemistry
- CHM 1390Y: Polymer and Materials Chemistry Seminar (Credit/No Credit)
- CHM 2304H: Research in Polymer and Materials Chemistry
- CHM 1303H: Solids as Advanced Polymer Materials

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.
Graduate Faculty

Full Members
Jonathan Abbatt - BSc, AM, PhD
Christine Allen - BSc, PhD
Robert Alexander Batey - BA, PhD
Timothy Bender - BSc, PhD, MCIC, MACS
Paul Brumer - BSc, PhD, FRSC, University Professor, Roel Buck Chair in Chemical Physics
Jik Chin - BSc, PhD
Al-Amin Dhirani - BSc, MSc, PhD
D. James Donaldson - BSc, PhD
Ulrich Feldl - MSc, PhD
Simon John Fraser - BA, PhD
Michael Georges - BSc, PhD
M Cynthia Goh - BSc, PhD
Raymond Kapral - BSc, PhD, FRSC
Lewis Kay - BSc, PhD, Canada Research Chair
Ronald Kluger - AB, AM, PhD, FRSC
Ulrich Krull - BSc, MSc, PhD, AstraZeneca Professor of Biotechnology
Eugenia Kumacheva - BS, MSc, PhD
Mark Lautens - BSc, PhD, AstraZeneca Professor of Organic Synthesis
Scott Mabury - BS, PhD (Chair)
Peter Macdonald - BSc, MSc, PhD
David McMillen - BSc, MSc, PhD
R J Dwayne Miller - BSc, PhD, FRSC, Canada Research Chair
Charles Mims - BS, PhD
Robert Morris - BSc, PhD (Associate Chair, Graduate Studies)
Jennifer Murphy - BSc, PhD
Geoffrey Ozin - BSc, DPhil, FRSC, University Professor, Canada Research Chair
John Polanyi - BSc, MSc, PhD, DSc, FRS, FRSC, University Professor
John Powell - BSc, PhD
Scott Prosser - BSc, MSc, PhD
Jeremy Schofield - BA, PhD
Greg Scholes - BSc, PhD
Dvira Segal
Barbara Sherwood Lollar - BA, PhD
Jumi Shin - BA, PhD
Molly Shoichet - BSc, MSc, PhD, Canada Research Chair
Andre Simpson - BSc, PhD
Mryna Simpson - BSc, PhD
Datong Song
Douglas Stephan
Michael Thompson - BSc, PhD, DSc, FRSC, FCIC
Thomas Tidwell - BS, AM, PhD
Gilbert Walker
Frank Wania - Dipl-Geoök, MPhil, PhD
Stuart Whittington - BA, PhD
Mitchell Winnik - BA, PhD, FRSC, University Professor
G Andrew Woolley - BSc, PhD
Andrei Yudin - BS, PhD
Deborah Zamble - BSc, PhD

Members Emeriti
Malcolm Bersohn - BS, MA, PhD
Adrian Brook - BA, PhD, FRSC, University Professor Emeritus
Imre Csizmadia - MSc, PhD
Alexander Harrison
J Bryan Jones
Alexander Kresge - BA, PhD, FRSC
Robert McCallum - BSc, PhD, FRSC
Stewart McLean - BSc, PhD
Anthony Poe - BA, BSc, MA, PhD, DIC, ScD
W John Reynolds - BSc, PhD
John Philip Valleau - BA, MA, PhD

Associate Members
Terry Bidleman - BSc, PhD
Vy Dong
Patrick Gunning
Rebecca Jockusch
Voula Kanelis
Derek Muir - BSc, MSc, PhD
Mark Nitz
Mark Taylor
Aaron Wheeler
Degree Programs

Cinema Studies  CIN

Faculty Affiliation
Arts and Science

Degree Programs Offered
Cinema Studies - MA

Overview
The Cinema Studies Institute offers a program leading to the Master of Arts degree in Cinema Studies. Our faculty have expertise in several areas, including film history, film theory, and film and culture.

Contact and Address
Web: www.utoronto.ca/cinema
E-mail: gradcinema.studies@utoronto.ca
Telephone: (416) 946-5138
Fax: (416) 946-0168
Cinema Studies Institute
University of Toronto
Innis College
2 Sussex Avenue
Toronto, Ontario  M5S 1J5
Canada

Degree Programs

Master of Arts

Minimum Admission Requirements
• 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 courses.
• Successful completion of a minimum of 6.0 full-course equivalents (FCE) 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, and an academic writing sample of no more than 3,000 words.

Program Requirements
• The MA is a course-work only program and therefore does not require a thesis.
• 4.0 FCEs over the course of an academic year, normally extending from September until August. Of the 4.0 FCEs:
  o 1.0 FCE will be devoted to either the writing of a major research paper or pursuing an internship.
  o 1.5 FCEs may be completed in the following way: 0.5 to 1.0 may be 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); the remaining 0.5 to 1.0 may be chosen from film-based courses offered by other units (non-CIN designator) but approved as relevant to the Cinema Studies master's program curriculum.
• All students complete CIN 1000H, CIN 1001H, and CIN 1002H.
• Additional requirements for students choosing the major research paper option:
  o CIN 1006Y
  o 0.5 to 1.0 FCE derived from CIN 1003H, CIN 1539H, CIN 6155H, CIN 6156H, CIN 6803H
  o 0.5 to 1.0 FCE derived from approved graduate-level courses offered outside CIN.
• Additional requirements for students choosing the internship option:
  o CIN 1007Y
  o 0.5 to 1.0 FCE derived from CIN 1003H, CIN 1539H, CIN 6155H, CIN 6156H, CIN 6803H
  o 0.5 to 1.0 FCE derived from approved graduate-level courses offered outside CIN.

Courses
Not all courses are offered every year. The Department should be consulted each session as to course offerings.

Core Courses
CIN 1000H  Historiography of the Cinema
CIN 1001H  Theories of the Cinema
CIN 1002H  Cinema and Culture

Plus one of:
CIN 1006Y  Major Research Paper in Cinema Studies
CIN 1007Y  Internship in Cinema Studies

Elective Courses
CIN 1003H  Women's Cinema and Women's Film Festivals
CIN 1539H  Film Comedy and Popular Culture
CIN 6155H  Actuality, Documentary, Reality
CIN 6156H  Dark Passages: Film and the Geometry of Racial Imagination
CIN 6803H  Intertextuality in Feminist Cinema: The Counter-Cinematic Impulse
Graduate Faculty

Full Members
Kay Armatage - BA, MA, PhD
Angelica Fenner - BA, MA, PhD
Charles Keil - BA, MA, PhD (Chair)
Robert King - BA, MA, PhD

Associate Members
Corinn Columpar - BA, PhD
Nicholas Sammond - BA, MA, PhD
Bart Testa - BA, MA (Coordinator of Graduate Studies)
Degree Programs

Civil Engineering  CIV

Faculty Affiliation
Applied Science and Engineering

Degree Programs Offered
Civil Engineering - MASc, MEng, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Environmental Engineering, see p. 441
   - Civil Engineering, MEng, MASc, PhD

Overview
The Department of Civil Engineering offers graduate programs leading to the Master of Applied Science, the Master of Engineering, and the Doctor of Philosophy. Qualified students are accepted for advanced studies in one of the following fields: building engineering, environmental engineering, structural engineering, transportation engineering, and engineering geoscience.

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.

Contact and Address
Admission
Web: www.civil.engineering.utoronto.ca
E-mail: graduateadmissions@civ.utoronto.ca
Telephone: (416) 978-5905
Fax: (416) 978-6813

Program
Web: www.civil.engineering.utoronto.ca
E-mail: graduateprograms@civ.utoronto.ca
Telephone: (416) 978-5904
Fax: (416) 978-6813

Department of Civil Engineering
Galbraith Building
35 St. George Street
University of Toronto
Toronto, Ontario M5S 1A4
Canada

Degree Programs

Master of Applied Science

Minimum Admission Requirements
- Students are accepted under the general regulations.
- Minimum mid-B average in each of the final two years of bachelor's degree program.
- Students who do not possess an undergraduate degree in civil engineering, may be required to take more than the usual number of courses.

Program Requirements
- Each student, in consultation with a staff member at the beginning of the program, will establish the distribution of time between course work and thesis or design project.
- Normally a minimum of five half-courses and a thesis. Some sections may require six half-courses and a thesis. Please consult the supervisor and/or refer to the departmental graduate student handbook for further details.

Master of Engineering

Minimum Admission Requirements
- Students are accepted under the general regulations.
- Minimum mid-B average in each of the final two years of study in a bachelor's degree program.
- Students who do not possess an undergraduate degree in civil engineering, may be required to take more than the usual number of courses.

Program Requirements
- Each student, in consultation with a staff member at the beginning of the program, will establish the distribution of time between course work and thesis or design project.
- Normally ten courses for the course work only program. Up to two courses may be replaced by a research/design project.
- There is no formal residence requirement for MEng students; therefore, the program may be completed through part-time studies.

Doctor of Philosophy

Minimum Admission Requirements
- Minimum A- average in bachelor's and master's degree programs.
- Satisfy the Department of the ability to undertake advanced research.
- Students are accepted under the general regulations, except for the following departmental regulations which supercede the general regulations.
- Admission directly from a bachelor's degree is not normally permitted.
If a student transfers from a master's degree program to a PhD program, courses taken during the master's program may be applied to the PhD program.

Program Requirements
- A major and 2 minor fields of study, normally consisting of a minimum of 4.5 full-course equivalents (FCE) in total beyond the bachelor's degree. More FCE may be required depending on the student's background preparation.
- PhD students with a MASc degree (or equivalent in the same field) must take 2.0 FCE beyond the MASc degree.
- Students enrolled in the MASc degree program who transfer to the PhD program without submitting a MASc thesis must complete a total of 4.5 FCE beyond the bachelor's degree program.
- Students with a MEng degree may use up to 3.0 FCE from the MEng program towards the PhD requirement of 4.5 FCE.
- Comprehensive examination after completing most of the course work and preferably within one year after first enrolment in the PhD program.
- Students normally spend at least two academic years of their program on campus on a full-time basis.

Courses
Not all courses are given every year. Some courses may require a prerequisite. Please consult the Department.

General Interest
CIV 1099H Special Studies in Civil Engineering
CIV 1307H Evaluating the Sustainability of Engineering Activities
CIV 1310H Infrastructure Economics
CIV 1337H Simulation in Civil Engineering
CIV 1504H Applied Probability and Statistics for Civil Engineering
CIV 1539H Evaluation of Civil Engineering Systems
CIV 1600H Readings in Technology and Modern Society I
CIV 1601H Readings in Technology and Modern Society II

Building Engineering
CIV 514H Concrete Technology
CIV 575H Building Science
CIV 1250H Instrumentation Techniques in Concrete Technology
CIV 1252H Repair and Maintenance of Concrete Structures
CIV 1277H Construction Estimating and Finance
CIV 1278H Pre-Project Planning and Constructability Analysis
CIV 1279H Construction Contract Documents
CIV 1280H Building Envelope Design
CIV 1281H Management of Building Projects
CIV 1282H Case Studies in Building Science
CIV 1283H Civil Informatics
CIV 1299H Special Studies in Civil Engineering

Environmental Engineering
CIV 540H Treatment Processes
CIV 549H Groundwater Flow and Contamination
CIV 550H Water Resources Engineering
CIV 1303H Water Resources Systems Modelling
CIV 1305H Water Resources Systems Analysis
CIV 1308H Physical/Chemical Treatment Processes
CIV 1309H Biological Treatment Processes
CIV 1319H Chemistry and Analysis of Water and Wastes
CIV 1335H Advanced Hydrogeology
CIV 1399H Special Studies in Civil Engineering

Geoscience
CIV 523H Geotechnical Design
CIV 529H Rock Engineering
CIV 1404H Material Fracture Dynamics: Experimental Methods
CIV 1410H Satellite Positioning and Remote Sensing
CIV 1419H Rock Dynamics
CIV 1420H Soil Properties and Behaviour
CIV 1421H Continuum Mechanics of Fluids and Solids
CIV 1446H Slopes and Earthworks
CIV 1499H Special Studies in Civil Engineering

Structural Engineering
CIV 510H Solid Mechanics II
CIV 513H Collaborative Engineering and Architectural Design Studio
CIV 517H Prestressed Concrete Structures
CIV 518H Behaviour and Design of Steel Structures
CIV 519H Structural Analysis II
CIV 1163H Mechanics of Reinforced Concrete
CIV 1164H Bridge Engineering
CIV 1169H Advanced Topics in Building Design
CIV 1167H Structural Dynamics and Earthquake Engineering
CIV 1174H Finite Element Methods in Structural Mechanics
CIV 1175H Design of Tubular Steel Structures
CIV 1199H Special Studies in Civil Engineering
CIV 1361H Reinforced and Prestressed Concrete Structures

Transportation Engineering and Planning
CIV 531H Transport III—Planning
CIV 533H Transport Operations
CIV 1505H Transportation Research Seminar
CIV 1506H Freight Transportation and ITS Applications
CIV 1507H Public Transport
CIV 1508H Airport Planning and Engineering
CIV 1535H Transportation and Development
CIV 1532H Fundamentals of IT's and Traffic Management
CIV 1538H Transportation Demand Analysis
CIV 1540H Urban Transportation Networks
CIV 1599H Special Studies in Civil Engineering
Graduate Faculty

Full Members
Baher Abdulhai - BSc, MSc, PhD
Barry Adams - BSc, MS, PhD, FCSCSE, PEng
Robert Andrews - BASc, MASc, PhD, PEng
William Bawden - BASc, MSc, PhD, PEng
Evan Bentz - BASc, PhD
Philip Byer - SB, SM, PhD, PEng
Constantin Christopoulos - BIng, MASc, PhD, PEng
Michael Collins - BE, PhD, FACI, FCSCE, PEng,
  University Professor, Bahen/Tanenbaum Professor
Adrian Crawford - BE, MASc, PhD
John Curran - BASc, MEng, PhD, PEng, Robert M Smith
  Chair in Geotechnical Mine Design and Analysis
Tamer El-Diraby - BSc, MSc, PhD
Georgia Fotopoulos - BSc, MSc, PhD, PEng
Douglas Paul Gauvreau - BSc, MSE, Dr.sc.techn, PEng
Murray Grabinsky - BASc, MASc, PhD, PEng
Giovanni Grasselli - MASc, PhD
Ronald Hofmann - BEng, MSc, PhD, PEng
R Douglas Hooton - BASc, MASc, PhD, FACI, FCSCE, PEng
Bryan Karney - BASc, MEng, PhD, PEng
Christopher Kennedy - BEng, DiplEcon, DIC, MASc,
  MBA, PhD, PEng
Heather MacLean - BASc, MBA, MSc, PhD, PEng
Brenda McCabe - BASc, PhD, FCSCSE, PEng (Chair)
Eric Miller - BASc, MASc, PhD, Bahen/Tanenbaum Professor
Jeffrey Packer - BE, MSc, PhD, DSc, FICE, FASCE, CEng, PEng (Coordinator of Graduate Studies)
Daman Panesar - BEng, MSc, PhD, PEng
Kim Pressnail - BASc, MASc, PhD, LLB
Matthew Roorda - BEng, MSc, PhD, PEng
Amer Shalaby - BSc, MASc, PhD, PEng
Shamim Sheikh - BSc, MASc, PhD, PEng
Brent Sleep - BASc, MASc, PhD, PEng
Willem Vanderburg - BASc, MASc, PhD, PEng
Frank Vecchio - BASc, MEng, PhD, PEng
Kaiwen Xia - BASc, MASc, PhD
R. Paul Young - BSc, MSc, Post-grad Cert Ed, PhD,
  CGeol, CEng, Keck Chair of Engineering Seismology and Rock

Members Emeriti
Peter Birkemoe - BSCE, MSCE, PhD, PEng
Jerzy Ganczarczyk - MSc, DSc, PEng
Ezra Hauer - BSc, MSc, PhD, PEng
Vanolin Hurdle - BS, MEng, PhD, PEng
Theodore Kenney - BEng, DIC, MSc, PhD, PEng
Bibhuti Mohanty - BSc, MSc, PhD, PEng
Kenneth Selby - BASc, MBA, PhD, PEng
Richard Soberman - BSc, SM, PhD, PEng
Gerald Steuart - BSc, MSc, PhD, PEng
John Timusk - BASc, MASc, PhD, PEng
George Will - BASc, MASc

Associate Members
David Bagley - BS, MS, PhD, PEng
Baidar Bakht - BSc, MSc, DSc, PEng
Murtaza Haider - PhD
Satish Joshi - PhD
David Keith - BSc, PhD
Steven Liss - BSc (Hon), MSc, PhD

124  Civil Engineering
Classics CLA

Faculty Affiliation
Arts and Science

Degree Programs Offered
Classics – MA, PhD
Greek or Latin - MA

Collaborative Programs Offered
Degree programs that participate in:
1. Ancient and Medieval Philosophy, see p. 411
   • Classics, PhD
2. Ancient Greek and Roman History, see p. 412
   • Classics, PhD
3. Editing Medieval Texts, see p. 437
   • Classics, PhD
4. Women and Gender Studies, see p. 473
   • Classics, MA, PhD

Overview
The Department of Classics provides advanced training leading to the Master of Arts and Doctor of Philosophy degrees in a wide range of fields: Ancient Greek Language and Literature, Latin Language and Literature, Ancient History, Ancient and Medieval Philosophy (in collaboration with the Department of Philosophy), and Ancient Science.

The Ancient Greek and Roman History Joint Collaborative Program (see separate entry in this calendar) provides for interdisciplinary study with faculty from the Graduate Program in History at York University.

Information about admission, application procedures and funding is available from the Department.

Contact and Address
Web: www.chass.utoronto.ca/classics/
E-mail: grad.classics@utoronto.ca
Telephone: (416) 978-5513
Fax: (416) 978-7307

Department of Classics
125 Queen's Park Crescent
University of Toronto
Toronto, Ontario M5S 2C7
Canada

Degree Programs

Classics

Master of Arts

Minimum Admission Requirements
• Successful completion of an undergraduate program in Classics with B+ average in final year and the equivalent of at least three and preferably four full years of training in each of Latin and Greek.
• Admitted to a one-year or two-year program, depending on student's level of preparation.
• Students who are otherwise qualified but possessing less training in the languages should consult with the Department about further preparation.

Program Requirements
• Satisfactory completion of the required courses (at least GRK 1000H, GRK 2000H, GRK 2100H and LAT 1000H, LAT 2000H, LAT 2100H).
• Satisfactory completion of the MA examination cycle with at least a B- grade on each component.
• Submission of an acceptable special essay with a grade of at least B.

Two-year Master of Arts
• Year 1 - GRK 1000H and LAT 1000H (intensive advanced language skills) and a selection of other courses approved by the Department. Students may be exempted from either 1000H course if they have satisfactorily completed comparable work in their undergraduate program. A standing of at least B+ must be earned in each undergraduate course. Students who do not complete these courses with appropriate standing may be required to withdraw from the MA program or to retake the courses.
• Year 2 - Classics of Greek Literature (GRK 2000H, GRK 2100H) and Classics of Latin Literature (LAT 2000H, LAT 2100H).
• Each student is assigned to a faculty advisor for CLA 2000H, the MA special essay, and works independently on the preparation of a research paper (about 8000 words in length). The special essay is assessed by a committee of two faculty members, including the advisor.

One-year Master of Arts
• Four half-courses: Classics of Greek Literature (GRK 2000H, GRK 2100H) and Classics of Latin Literature (LAT 2000H, LAT 2100H).
• Students may be required to take GRK 1000H and/or LAT 1000H to help them prepare for the MA examinations.
• Each student is assigned to a faculty advisor for CLA 2000H, the MA special essay, and works independently on the preparation of a research paper (about 8000 words in length). The special essay is assessed by a committee of two faculty members, including the advisor.
Degree Programs

- Completion of the MA examinations with at least B- in each component:
  - Sight translation examination in Greek (not required for the MA in Latin).
  - Sight translation examination in Latin (not required for the MA in Greek).
  - Reading list examination in Greek Prose.
  - Reading list examination in Greek Verse.
  - Reading list examination in Latin Prose.
  - Reading list examination in Latin Verse.

Program Requirements

- Students admitted under standard conditions described above must:
  - Satisfactorily complete required courses (GRK 1000H, GRK 2000H, GRK 2100H and LAT 1000H, LAT 2000H, LAT 2100H). In exceptional circumstances and at the Department’s discretion, students who require additional preparation for the reading lists may be required to take a selection of courses approved by the Department during their first year before beginning to prepare for the qualifying examinations.
  - Pass all components of the MA examination cycle with grades of at least B+.
  - Earn a grade of at least A- on the special essay.
  - The examination cycle and the special essay are referred to as the qualifying examinations and qualifying essay. Doctoral students who complete the qualifying examinations and essay at a lower standard which nevertheless satisfies the MA requirement will be granted the MA but may be required to withdraw from the doctoral program or to retake examinations.
  - Students admitted with advanced standing are exempt from the qualifying examinations and qualifying essay.
  - Demonstrate adequate reading knowledge of two languages of research, other than English, one of which will normally be German. By the end of year one, students are expected to have passed one modern language examination. By the end of year two, students should have completed the other modern language examination.
  - In the second year (first year for students admitted with advanced standing) students take CLA 3000H Research Techniques in Classics and at least three of the required total of five research seminars.
  - Minor field (CLA 3500H). The minor field is established at the end of second year (first year for students admitted with advanced standing) and must be clearly distinct from the major field. The field is prepared under the supervision of two faculty advisors. The examination on the field is conducted by a committee composed of the two faculty advisors and the graduate coordinator.
  - Major field (CLA 4000Y). The major field defines a broad area within which the dissertation topic falls. It is normally established by the third year of the program (second year for students admitted with advanced standing) and is directed by the supervisory committee. Preparation for the examination includes the completion of a satisfactory research essay. The field is examined by means of two written examinations, one of which must involve translation from the list of primary sources, and an oral examination covering the research essay and the examination papers.
  - By the end of the third year (second year for students admitted with advanced standing) students should have completed their minor field examination and the rest of their required research seminars.

Greek or Latin

Master of Arts

Students should be aware that the MA in Greek or Latin alone is not normally adequate preparation for doctoral study in Classics.

Minimum Admission Requirements

- Successful completion of an undergraduate program in Classics with B+ average in final year and the equivalent of at least three and preferably four full years of training in each of Latin and Greek.
- Admitted to one-year or two-year program, depending on student’s level of preparation.
- Students who are otherwise qualified but possessing less training in the languages should consult with the Department about further preparation.

Program Requirements

- MA students in Greek or Latin must satisfy all the normal requirements for the MA in Classics, but are only required to pass one of the MA sight translation examinations in the minor language.

Doctor of Philosophy

Minimum Admission Requirements

- Standard conditions - successful completion of either a strong undergraduate program in Classics (with at least an A- average in the final year) or a strong MA program in Classics (at least a B+ average with at least one A-), with the equivalent of at least four years of training in each of Latin and Greek and a broad preparation in the reading of ancient texts in the original languages.
- Advanced standing - applicants may be admitted with advanced standing if they have completed the revised MA program at the University of Toronto (having graduated in the year 2000 or later) with grades of at least B+ in all components and a grade of at least A- on the special essay. Applicants must have reading knowledge of one of the modern languages required for the PhD.
• The major field examination should be completed by the middle of fourth year (third year for students admitted with advanced standing).
• The dissertation should be completed by the end of the fifth year (fourth year for students admitted with advanced standing).

**Courses**

- **GRK 1000H** Advanced Studies in Greek Language (Credit/No Credit)
- **GRK 2000H** Classics of Greek Verse (Credit/No Credit)
- **GRK 2100H** Classics of Greek Prose (Credit/No Credit)
- **GRK 2500Y** Greek Verse Exam
- **GRK 2501Y** Greek Prose Exam
- **GRK 2505Y** Greek Sight Exam
- **LAT 1000H** Advanced Studies in Latin Language (Credit/No Credit)
- **LAT 2000H** Classics of Latin Verse (Credit/No Credit)
- **LAT 2100H** Classics of Latin Prose (Credit/No Credit)
- **LAT 2500Y** Latin Verse Exam
- **LAT 2501Y** Latin Prose Exam
- **LAT 2505Y** Latin Sight Exam
- **CLA 2000H** MA Special Essay
- **CLA 3000H** Research Techniques in Classics
- **CLA 3020H** Research Methods in Ancient History
- **CLA 3200Y** Work in Progress in Ancient History
- **CLA 3500H** Minor Field
- **CLA 4000Y** Major Field

**Research Seminars**

- **CLA 5000H** Early Greek Epic
- **CLA 5001H** Early Greek Poetry
- **CLA 5002H** Studies in Greek Drama I
- **CLA 5003H** Studies in Greek Drama II
- **CLA 5004H** Studies in Greek Poetry
- **CLA 5007H** Criticism of Latin Poetry
- **CLA 5008H** Roman Comedy
- **CLA 5009H** Literature of the Roman Republic
- **CLA 5010H** Virgil
- **CLA 5011H** Satire and Satirical Writing
- **CLA 5012H** Studies in Ancient Philosophy I
- **CLA 5013H** Studies in Ancient Science
- **CLA 5014H** The Ancient Novel
- **CLA 5015H** Latin Poetry of the Empire
- **CLA 5016H** Topics in Greek and Hellenistic History
- **CLA 5017H** Latin Legal Texts and the History of Late Roman Institutions
- **CLA 5018H** Topics in Roman History
- **CLA 5019H** Topics in Later Roman History
- **CLA 5020H** Studies in Ancient Philosophy II

- **CLA 5021H** Topics in the Study of Greek and Hellenistic Literature and Culture
- **CLA 5022H** Topics in the Study of Greek and Hellenistic Society
- **CLA 5023H** Topics in the Study of Roman Literature and Culture
- **CLA 5024H** Topics in the Study of Roman Society
- **CLA 5025H** Topics in Greek and Hellenistic History II
- **CLA 5026H** Topics in Graeco-Roman Historiography I
- **CLA 5027H** Topics in Graeco-Roman Historiography II
- **CLA 5028H** Topics in Graeco-Roman History I
- **CLA 5029H** Topics in Graeco-Roman History II
- **JMT 1000H** Andronicus of Rhodes and the Early Peripatos
- **JMT 1001H** Topics in Ancient Philosophical Commentators
- **JMT 1002H** Augustine: Soliloquia

**Directed Reading**

- **CLA 1300Y** Studies in Classical Antiquity
- **CLA 1301H** Studies in Classical Antiquity
- **CLA 1302Y** Studies in Classical Antiquity
- **CLA 1303H** Studies in Classical Antiquity
- **CLA 1306H** Studies in Greek Literature I
- **CLA 1307H** Studies in Greek Literature II
- **CLA 1308H** Studies in Latin Literature I
- **CLA 1309H** Studies in Latin Literature II

**Graduate Faculty**

**Full Members**

- Rachel Barney - BA, PhD, Canada Research Chair
- Christier Bruun - BA, MA, PhD (Coordinator of Graduate Studies)
- Jonathan Burgess - BA, MA, PhD
- Michael Dewar - BA, MA, DPhil
- Erik Gunderson - BA, MA, PhD
- Brad Inwood - BA, MA, PhD, FRSC, Canada Research Chair
- Alexander Jones - BA, PhD, FRSC
- Alison Keith - BA, PhD (Chair)
- John Magee - BA, MA, PhD
- Hugh Mason - BA, AM, PhD
- Catherine Rubincam - BA, PhD
- Victoria Wohl - BA, MA, PhD

**Members Emeriti**

- Timothy Barnes - BA, MA, DPhil, FRSC
- Roger Beck - BA, MA, PhD
- John Grant - BA, MA, PhD
- Marjorie Irwin - BA, MA, PhD
- Christopher McDonough - BA, MA, PhD
- John Rist - BA, MA, FRSC
- Emmet Robbins - BA, MA, PhD
- John Traill - BA, MA, PhD
- Malcolm Wallace - BA, MA, PhD

*Courses which may continue over a program. The course is graded when completed.*
Degree Programs

Associate Members
Benjamin Akrigg - BA, PhD
Andreas Bendlin - PhD
Michel Cottier - BA, PhD
Jonathan Edmondson - PhD
Regina Hoschele - MA, PhD
Thomas Lytle - BA, PhD
Martin Revermann - PHD
Comparative Literature  

Faculty Affiliation  
Arts and Science

Degree Programs  
Comparative Literature – MA, PhD

Overview  
Applicants interested in graduate study at the Centre for Comparative Literature at the University of Toronto should consult the Centre’s Web site www.chass.utoronto.ca/complit. It provides updated information about requirements, graduate programs, course offerings, and academic profiles of graduate faculty.  
The Centre offers Master of Arts and Doctor of Philosophy degree programs to students qualified to pursue literary studies involving several languages. If the language and other requirements of the Centre are satisfied, students may pursue theoretical issues that cross traditional disciplines.  
Admissions are selective; therefore, applicants with the minimum qualifications cannot be guaranteed admission.  
Applicants, including those from the University of Toronto, must arrange for recommendations from two referees; must submit a statement of purpose not exceeding 500 words; and must submit a sample of written work, preferably a short essay on a literary topic. Admission to all programs for higher degrees will be based upon the applicant's overall qualifications and upon the evidence of the references and statement. The deadline for receiving applications to both the MA and PhD programs is February 1.  
All incoming students will meet with the Graduate Coordinator to discuss their program and to decide on their course of study before beginning classes.

Collaborative Programs  
Degree programs that participate in:  
1. Book History and Print Culture, see p. 424  
   • Comparative Literature, MA, PhD  
2. Women and Gender Studies, see p. 473  
   • Comparative Literature, MA, PhD

Contact and Address  
Web: www.chass.utoronto.ca/complit  
E-mail: complit@chass.utoronto.ca  
Telephone: (416) 813-4041  
Fax: (416) 813-4040  
Centre for Comparative Literature  
Isabel Bader Theatre  
Third Floor  
93 Charles Street West  
Toronto, Ontario M5S 1K9  
Canada

Degree Programs  
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.  
• Four-year University of Toronto bachelor's degree, or its equivalent from a recognized university, that includes courses in literature and languages with an average grade of at least B+ in the applicant's overall program.  
• Demonstrated experience in the study of two literatures at the undergraduate level and an ability to work at the graduate level in at least one language other than English.  
• Students may be admitted to either a one-year or a two-year degree depending upon their academic background. Those who have sufficient training in at least two literatures in the original languages may be admitted to a one-year program.  
• All applicants must register as full-time students.

Program Requirements  
• Students admitted to the one-year program must complete at least 4 full-course equivalents (FCE) including at least 2.5 FCE in COL courses, one of which must be COL 1000H.  
• Students admitted to the two-year program must complete at least 6.0 FCE including at least 3.5 FCE in COL courses, one of which must be COL 1000H.  
• 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.  
• A plan of study defined by each MA student through consultation with the graduate coordinator 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 course work.  
• 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.
Doctor of Philosophy

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.
- University of Toronto master's degree, or its equivalent, from a recognized university, 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.
- Submit preliminary statement of purpose.

Program Requirements

- A student with an MA in Comparative Literature, or its equivalent, must take at least 5.0 full-course equivalents (FCE), of which 3.0 FCE 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 up to 8.0 FCE, of which at least 4.0 FCE 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/Coordinator of Graduate Studies.
- Students define the scope and approach of their plan of study in consultation with the Graduate Coordinator and other faculty. During the first two years of the program, students complete course work, language requirements, and prepare for the field examination. Course work 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 the second year of PhD study. The field examination is taken no later than the end of the first session of the third year.
- Students must demonstrate an ability to work at the graduate level in two languages and literatures other than English. An adequate reading knowledge of a third language other than English must be demonstrated before taking the field examination. Certification of graduate level competence and reading knowledge is given to all students who qualify. All students are expected to achieve a thorough command of at least two literatures and must do work at the graduate level in another literature. This means that students must include courses in three literatures in their program or show evidence of extensive independent research under the supervision of members of the graduate faculty. Students who intend to specialize in comparative French-Canadian and English-Canadian literature may fulfill their other literature requirements through graduate-level work in continental French and British literature.

- 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.
- All PhD students are required to enrol in COL 4000Y, a credit/non-credit course, in addition to the agreed upon number of FCEs in their individual program. Normally students enrol in COL 4000Y after completing their course work. The course has no specific content, but it recognizes the work done in preparation for the field examination.
- Prepare and defend a dissertation which must be an original and significant contribution to the existing body of knowledge.
- 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. Ideally, the PhD program in Comparative Literature should be completed in four years.

Courses

Students should consult the Comparative Literature handbook as well as the handbooks of other departments for courses that may be taken for credit. Information about course availability is also contained in the handbooks.

Core Program

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>COL 1000H</td>
<td>Faculty Seminar: Theories of Literature and Criticism</td>
</tr>
<tr>
<td>COL 1255H</td>
<td>Aspects of Structuralism</td>
</tr>
<tr>
<td>COL 1400H</td>
<td>Reading and Research for the MA</td>
</tr>
<tr>
<td>COL 1910H</td>
<td>Reading and Research for the PhD</td>
</tr>
<tr>
<td>COL 3380Y</td>
<td>Globalization and Culture</td>
</tr>
<tr>
<td>COL 4000Y*</td>
<td>Practicum on Research and Bibliography in Comparative Literature (Credit/No Credit)</td>
</tr>
<tr>
<td>COL 5012Y</td>
<td>Readings in Czech and Russian Literary Theory</td>
</tr>
<tr>
<td>COL 5021H</td>
<td>The Body in Medieval Literature</td>
</tr>
<tr>
<td>COL 5032H</td>
<td>Feminist Approaches to Medieval Literature</td>
</tr>
<tr>
<td>COL 5025Y</td>
<td>Feminism and Postmodernism: Theory and Practice</td>
</tr>
<tr>
<td>COL 5050Y</td>
<td>Social Constructions and Artistic Images of Women in Modern Chinese Literature, Drama and the Movies</td>
</tr>
<tr>
<td>COL 5064H</td>
<td>Medieval Literary Theory</td>
</tr>
<tr>
<td>COL 5071H</td>
<td>Psychoanalysis, &quot;Race,&quot; and Culture</td>
</tr>
<tr>
<td>COL 5077Y</td>
<td>Ruins</td>
</tr>
<tr>
<td>COL 5079H</td>
<td>Neo-primitivism in Contemporary Discourses</td>
</tr>
</tbody>
</table>

* Courses which may continue over a program. The course is graded when completed.
Degree Programs

COL 5072H  Affinities: Readings of Realism and Radicalism
COL 5073H  Chinese Literature in the Modern World
COL 5074H  Art and Politics: Bertolt Brecht, Robert Lepage, Robert Wilson
COL 5075H  Theorizing Literary History: the Example of the “Renaissance”
JIC 5000H  Narrativity and Intertextuality in Italian Fiction: “Boccaccio-Eco”
JLE 5075H  Orientalism and Opera: Interdisciplinary Approaches

Graduate Faculty

Full Members
Veronika Ambros - BA, MA, PhD
Antje Budde
Eric Cazdyn - BA, MA, PhD
J Edward Chamberlin - BA, PhD, FRSC, University Professor
Rebecca Comay - BA, MA, PhD
Uzoma Esonwanne - BA, MA, PhD
John Fleming - BA, MA, PhD
Barbara Havercroft - BA, MA, PhD (Coordinator of Graduate Studies)
Linda Hutcheon - BA, MA, PhD, University Professor, FRSC
Eva-Lynn Jagoe - MA, PhD
Pia Kleber - BA, MA, PhD
Ann Komaromi - BA, MA, PhD
Thomas Lahusen - BA, MA, PhD
Roland Le Huenen - L es L, DenPh, ChPA, FRSC (Director)
Julie LeBlanc - MA, PhD
Victor Li - BA, MA, PhD
Yue Meng
Jill Ross - BA, MA, PhD
Stephen Rupp - BA, MA, MPhil, PhD
John Zilcosky - PhD

Members Emeriti
George Bisztray - PhD
Natalie Davis - BA, MA, PhD, FAmAcAs, CFBrAc
Lubomir Dolezel - BA, MA, PhD, FRSC
Eva Kushner - MA, PhD, FRSC
Peter Nesselroth - MA, PhD, ChPA
Anthony Percival - BA, MA, PhD
Brian Stock - AB, PhD
Mario Valdes - BA, MA, PhD, FRSC, Miembro Correspondiente de la Academia Mexicana

Associate Members
Suzanne Akbari - BA, MA, MPhil, PhD
Christopher Barnes - BA, MA, PhD
Josiah Blackmore - BA, MA, PhD
Russell Brown - BA, MA, PhD
Rocco Capozzi - BA, MA, PhD
Caryl Clark - BMus, MA, PhD
Angela Cozea - BA, MA, PhD
Willi Goetschel - LicPhil, PhD
Sebastian Guenther - MA, PhD
Marsha Hewitt - BA, MA, MA, PhD
Brad Inwood - BA, MA, PhD, FRSC, Canada Research Chair
Heather Jackson - BA, MA, PhD
Alison Keith - BA, PhD
James Kippen - BA, PhD
Elizabeth Mtn Legge - BA, MA, PhD
Garry Leonard - BA, MA, PhD
Frederick Marker - AB, DFA
Hugh Mason - BA, AM, PhD
Jill Matus - BA, MA, PhD
Andreas Motsch - MA, PhD
John Noyes - BA, MA, PhD
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Domenico Pieterpaolo - BSc, MA, PhD
Olga Pugliese - BA, MA, PhD
Atsuko Sakaki - MA, PhD
Rosa Sarabia - BA, MA, PhD
Luca Somigli - DLett, PhD
Ricardo Sternberg - BA, MA, PhD
David Thomson
Tamara Trojanowska - BA, MA, PhD
Ming Xie - PhD

Comparative Literature  131
Degree Programs

Computer Science  CSC

Faculty Affiliation
Arts and Science

Degree Programs Offered
Computer Science – MSc, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Genome Biology and Bioinformatics, see p. 448
   • Computer Science, PhD
2. Knowledge Media Design, see p. 462
   • Computer Science, MSc, PhD

Overview
The Department of Computer Science offers a graduate program leading to two degrees: Master of Science and Doctor of Philosophy. The graduate program consists of courses and research. Research is conducted under the supervision of a faculty member.

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, financial computation, data structures, algorithm design and analysis, computational complexity, cryptography, combinatorics, graph theory, artificial intelligence, neural networks, knowledge representation, computational linguistics, 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, also available at www.cs.utoronto.ca/DCS/Grad/index.html.

Contact and Address
Web: www.cs.utoronto.ca
Email: gradprograms@cs.utoronto.edu
Telephone: (416) 978-8762
Fax: (416) 978-1931

Department of Computer Science
Graduate Office
Room 3304, Sandford Fleming Building
10 King's College Road
University of Toronto
Toronto, Ontario M5S 3G4
Canada

Degree Programs

Master of Science

Minimum Admission Requirements
• Successful completion of an undergraduate degree equivalent to a four-year program at the University of Toronto with a standing equivalent to at least B+.
• Preference 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 TOEFL score of at least 580 on the paper-based test and 4 on the TWE; 237 on the computer-based test and 4 on the essay rating component; 93/120 on the internet-based test and 22/30 on the writing and speaking sections.

Program Requirements
• 1.5 to 2.5 graduate full-course equivalents (FCE) in computer science. The courses must satisfy a breadth requirement to ensure a broad and well-balanced knowledge of computer science. The number of FCE required will be determined in consultation with the supervisor and the graduate coordinator.
• A major research paper 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.
• This degree is offered on either a full-time or part-time basis.

Doctor of Philosophy

Minimum Admission Requirements
• Successful completion of a master's degree with a standing equivalent to at least B+. In exceptional circumstances, applicants may be admitted to this program directly from a bachelor's degree with at least A- standing. 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 TOEFL score of at least 580 on the paper-based test and 4 on the TWE; 237 on the computer-based test and 4 on the essay rating component; 93/120 on the internet-based test and 22/30 on the writing and speaking sections.
Program Requirements

- Students entering the PhD program with a computer science master's degree will require 1.5 to 3.0 full-course equivalents (FCE) and a thesis. Other students will require 3.0 to 4.5 FCE and a thesis. The number of courses required will be determined in consultation with the supervisor and the graduate coordinator. The courses must satisfy a breadth requirement to ensure a broad and well-balanced knowledge of computer science.
- At approximately 30 months, students will be expected to pass a qualifying examination in their area of research.
- The most important part of doctoral work is original research conducted under the direction of a faculty member. This research must constitute a significant and original contribution to computer science. The results must be presented in a thesis and defended at department and graduate school oral examinations.

Courses

Programming Languages and Methodology
CSC 2104H Formal Methods of Program Design
CSC 2106H Requirements Engineering
CSC 2107H Compilers and Interpreters
CSC 2108H Automated Verification
CSC 2122H Language and Compiler Design
CSC 2123H Managing the Software Organization
CSC 2124H Topics in Programming Languages
CSC 2125H Topics in Software Engineering
CSC 2130H Empirical Research Methods in Software Engineering

Computer Systems: Hardware and Software
CSC 2204H Operating Systems
CSC 2205H Performance in Distributed Operating Systems
CSC 2206H Computer Systems Modelling
CSC 2207H Topics in Computer Organization
CSC 2208H Advanced Operating Systems
CSC 2209H Computer Networks
CSC 2211H Introduction to Distributed Computing
CSC 2220H Structure and Correctness in Operating Systems
CSC 2221H Topics in the Design and Implementation of Operating Systems
CSC 2222H Topics in Mobile and Pervasive Computing
CSC 2223H Topics in Multiple Access Communications Networks
CSC 2230H Topics in Computer Systems

Numerical Analysis and Scientific Computation
CSC 2302H Initial Value Problems for Ordinary Differential Equations
CSC 2305H Numerical Methods for Optimization Problems
CSC 2306H High Performance Scientific Computing
CSC 2307H Numerical Software
CSC 2308H Numerical Methods for Nonlinear Equations
CSC 2310H Computational Methods for Partial Differential Equations
CSC 2312H The Design and Assessment of Numerical Algorithms
CSC 2321H Matrix Calculations
CSC 2322H Boundary Problems for Ordinary Differential Equations
CSC 2324H Advanced Methods for Partial Differential Equations
CSC 2326H Topics in Numerical Analysis

Computational Complexity
CSC 2401H Introduction to Computational Complexity
CSC 2404H Computability and Logic
CSC 2405H Automata Theory
CSC 2411H Linear Programming and Combinatorial Optimization
CSC 2415H Advanced Topics in Distributed Computing
CSC 2416H Machine Learning Theory
CSC 2423H Finite Model Theory and Descriptive Complexity
CSC 2426H Topics in Cryptography
CSC 2428H Logic and Automata
CSC 2429H Topics in the Theory of Computation
MAT 1750H Computational Mathematics

Applied Discrete Mathematics
CSC 2406H Triple Systems
CSC 2410H Algorithms in Graph Theory
CSC 2412H Computer Algebra
CSC 2413H Combinatorial Methods and Designs
CSC 2414H Topics in Applied Discrete Mathematics
CSC 2418H Computational Structural Biology
CSC 2421H Algebraic and Combinatorial Techniques in Complexity Theory
CSC 2422H Reasoning About Knowledge
CSC 2427H Topics in Graph Theory

Artificial Intelligence
CSC 2501H Computational Linguistics
CSC 2502H Knowledge Representation and Reasoning
CSC 2503H Foundations of Computer Vision
CSC 2506H Probabilistic Learning and Reasoning
CSC 2511H Natural Language Computing
CSC 2512H Constraint Satisfaction Problems
CSC 2515H Introduction to Machine Learning
CSC 2517H Discrete Mathematical Models of Sentence Structure
CSC 2518H Spoken Language Processing
CSC 2519H Natural Language Semantics
CSC 2520H The Computational Lexicon
CSC 2523H Object Modelling and Recognition
CSC 2528H Advanced Computational Linguistics
CSC 2530H Visual Modelling
CSC 2532H Dynamical Systems and Artificial Intelligence
CSC 2533H Foundations of Knowledge Representation
CSC 2534H Decision Making Under Uncertainty
CSC 2535H Learning Algorithms for Neural Networks
Degree Programs

CSC 2539H Topics in Computer Vision
CSC 2540H Special Topics in Computational Linguistics
CSC 2541H Topics in Machine Learning
CSC 2542H Topics in Knowledge Representation and Reasoning
JST 4501Y Belief Functions and the Assessment of Uncertainty

Computer Graphics and Human-Computer Interaction
CSC 2504H Computer Graphics
CSC 2505H Geometric Representations for Computer Graphics
CSC 2514H Human-Computer Interaction
CSC 2521H Topics in Computer Graphics
CSC 2522H Advanced Image Synthesis
CSC 2524H Topics in Interactive Computing
CSC 2529H Computer Animation
CSC 2536H Computer Supported Cooperative Work
KMD 1001H Fundamental Concepts in Knowledge Media Design

Information Systems
CSC 2231H Packet Switch and Network Architectures
CSC 2417H Algorithms for Genome Sequence Analysis
CSC 2431H Topics in Computational Molecular Biology
CSC 2507H Conceptual Modeling
CSC 2508H Advanced Management Systems
CSC 2509H Data Management Systems
CSC 2510H Topics in Information Systems
CSC 2525H Research Topics in Database Management
CSC 2526H HCI: Topics in Ubiquitous Computing
CSC 2527H The Business of Software
CSC 2531H Advanced Topics in Data Management Systems
CSC 2538H Topics in Foundations of Databases
CSC 2543H Research Topics in XML Retrieval

Special Courses
CSC 2199H Special Reading Course in Programming
CSC 2299H Special Reading Course in Computer Systems
CSC 2399H Special Reading Course in Numerical Computation
CSC 2499H Special Reading Course in Theoretical Aspects of Computer Science
CSC 2599H Special Reading Course in Computer Applications
CSC 2600H Topics in Computer Science
CSC 4000Y M.Sc. Research Project in Computer Science

Graduate Faculty

Full Members
Tarek Abdelrahman - BSc, MSc, PhD, Jeffrey Skoll
Chair in Software Engineering
Cristiana Amza - BS, MS, PhD
Fahiem Bacchus - MSc, PhD (Associate Chair, Graduate Studies)
Ronald Baecker - BS, MSc, PhD
Ravin Balakrishnan - BSc, MSc, PhD
J. Christopher Beck - BSc, MSc, PhD
Ian Blake - BASc, MSc, PhD, PEng
Anthony Bonner - BSc, MSc, PhD
Allan Borodin - BA, PhD, FRSC
Craig Boutilier - MSc, PhD
Marsha Chechik - MSc, PhD
Mark Chignell - BSc, MSc, PhD
Christina Christara - BSc, MSc, PhD
Mariano Consens - BEng, MSc, PhD
Stephen Cook - BS, AM, PhD, FRSC, FRSA, University Professor
Derek Corneil - BSc, MA, PhD
Eyal De Lara - BSc, MSc, PhD
Angela Demke Brown - BSc, MSc, PhD
Sven Josef Dickinson - MSc, PhD (Acting Chair)
Stephen Michael Easterbrook - BSc, PhD
Faith Ellen - BM, MMath, PhD
Wayne Enright - BSc, MSc, PhD
Thomas Fairgrieve - MSc, PhD
Eugene Fiume - BM, MSc, PhD
David James Fleet - BSc, MSc, PhD
Mark Fox - BSc, PhD, FAAA, FCIAI, NSERC Industrial Research Chair in Enterprise Integration
Brendan Frey - BSc, MSc, PhD, Canada Research Chair in Software Engineering
Yashar Ganjali - BSc, MSc, PhD
Ashvin Goel - BSc, MSc, PhD
G Scott Graham - BSc, MA, MSc, PhD
Vassos Hadzilacos - BSc, MA, MSc, PhD
Vassos Hadzilacos - BSc, MA, MSc, PhD
Stephanie Hehn - MSc, PhD
Aaron Hertzmann - BS, PhD
Geoffrey Hinton - BA, PhD, FRSC, FRSA
Graeme Hirst - BA, BSc, MSc, PhD
Kenneth Jackson - BSc, MSc, PhD
Hans Arno Jacobsen - Dip, PhD, Bell University Labs Chair in Software Engineering
Allan Jepson - BSc, PhD
Igor Jurisica - Dipling, MSc, PhD
Nick Koudas - BSc, MSc, PhD
Kiriakos Kutulakos - BSc, MSc, PhD
Hector Levesque - BSc, MSc, PhD
Baochun Li - BE, MS, PhD, Bell University Labs Chair in Computer Engineering
Leonid Libkin - BSc, MSc, PhD
David Lie - BASc, MS, PhD
Jorg Liebeherr - DiplIng, PhD, Nortel Networks Chair in Architecture and Services
Ryan Lilien - BSc, MSc, PhD
Wallace James MacLean - BASc, MSc, PhD, PEng
Avner Magen - BSc, MSc, PhD
Peter Josef Marbach - BSc, MSc, PhD
Rudolf Mathon - MSc, PhD
Sheila McIlraith - MMath, PhD
Eric Mendelsohn - BSc, MSc, PhD
Renee Miller - BS, PhD
Michael Molloy - BMath, MMath, PhD
John Mylopoulos - BSc, MSc, PhD
Radford Neal - BSc, MSc, PhD
Gerald Penn - BSc, MSc, PhD
Toniann Pitassi - MSc, PhD
Charles Rackoff - SB, SM, PhD
Sam Roweis - BSc, MSc, PhD
Stefan Saroiu - PhD
monica schraefel - MSc, PhD
Michael Shub - AB, MA, PhD,
Karan Singh - BSc, MSc, PhD
Brian Cantwell Smith - BS, MS, PhD, Canada Research Chair
J. Gregory Steffan - BASc, MASc, MSc, PhD, PEng
Suzanne Ava Stevenson - MSc, PhD
Michael Stumm - DipMath, PhD
Sam Toueg - BSc, MSc, PhD
David Wortman - BE, MS, PhD
Richard Zemel - MSc, PhD

Members Emeriti
Peter Boulton - BASc, MASc, PhD, PEng
Calvin Carl Gotlieb - MSc, PhD, D Math, D Eng, FRSC
James Hume - BA, MA, PhD
Alasdair Urquhart - MA, PhD
Zvonko Vranesic - BASc, MASc, PhD, PEng

Associate Members
Dhavide Aruliah - BSc, MSc, PhD
Anindo Banerjea - BTech, PhD
Helen Suzanna Becker - BSc, MSc, PhD
Angelos Bilas - Dipl CS&E, MA, PhD
Alex Borgida - MSc, PhD
Michael (Mikhail) Brudno - BA, MSc, PhD
Sheelagh Carpendale - BSc, MSc, PhD
Richard Cleve - BSc, MSc, PhD
John Danahy - BLA, C UrbDes, MSc Urb&DesPl
Janice Glasgow - BSc, MMath, PhD
Michael Gruninger - BSc, MSc, PhD
Gregory Karakoulas - BSc, MSc, PhD
Anthony LaMarca - BSc, MSc, PhD
Yves Lesperance - BSc, MSc, PhD
Chia Shen - BSc, MSc, PhD
Cristian Sminchisescu - BSc, MSc, PhD
Kevin Stoodley - BSc, MSc
Richard Telfer - BSc, MSc, PhD
Khai Nhut Truong - BA, MSc, PhD
John Tsotsos - BASc, MSc, PhD
Michiel Van De Panne - BSc, MSc, PhD
Gregory Wilson – MSc, PhD,
Criminology CRI

Faculty Affiliation
School of Graduate Studies

Degree Programs Offered
Criminology - MA, Combined JD/MA, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Addiction Studies, see p. 406
   - Criminology, MA, PhD
2. Women and Gender Studies, see p. 473
   - Criminology, MA, PhD

Overview
The primary aim of the graduate program in Criminology is to provide graduate students with opportunities for advanced multidisciplinary study and supervised research experience concerning crime and the administration of criminal justice. It allows students to become familiar with the existing body of criminological knowledge and to develop critical and analytical skills in relation to the study of crime and the various approaches and techniques of research appropriate to the field. It is specifically designed to educate students for careers (1) in teaching or research in criminology fields and (2) in which a basic training in criminology and the ability to embark upon and critically evaluate criminological research are necessary or desirable.

Students who are enrolled in doctoral programs in other departments of the University of Toronto, and who plan to undertake graduate research on a criminological topic, may apply to be appointed as Junior Fellows at the Centre of Criminology. The overall objective of the program is to involve doctoral students who are studying in areas related to criminology and to enhance the intellectual life of the Centre. Under special circumstances, registered graduate students from other universities involved in criminological research may apply to be appointed as Visiting Junior Fellows.

Contact and Address
E-mail: crim.grad@utoronto.ca
Web: www.criminology.utoronto.ca
Telephone: (416) 978-8679
Fax: (416) 978-4195

Centre of Criminology
14 Queen's Park Crescent West
University of Toronto
Toronto, Ontario M5S 3K9
Canada

Degree Programs

Master of Arts

Minimum Admission Requirements
- Applicants must have a four-year University of Toronto bachelor’s degree or its equivalent from a recognized university. A four-year bachelor’s degree normally consists of 20 full-course equivalents (FCE). 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.
- The MA program is designed for students familiar with the approaches and methodologies associated with the social sciences. It would be advantageous for applicants to have some background in the theories of crime and deviance and a basic knowledge of social science research methods. A student who is admitted without such background may be required to do special work before being enrolled.
- 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. Students with professional experience who meet the academic admission requirements are encouraged to join the program.
- It is essential that all incoming graduate students have a command of English. Facility 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:
  o Paper-based TOEFL exam: 580 and 5 on the TWE
  o Computer-based TOEFL exam: 237 and 5 on the essay rating component
  o 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 before a formal offer of admission can be made.

Program Requirements
- MA students can complete the program in one of two ways
  o by completing 4.0 full-course equivalents (FCE) within 9 months or
  o by completing 3.0 FCE and a research paper within 12 months
The degree program divides into two sections: compulsory and optional courses.

- The compulsory section consists of a course on research methods (CRI 2010H).
- The optional courses allow students to engage in specialized study of different approaches to, and topics within, criminology. The optional 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 1.0 FCE from another graduate unit in lieu of optional courses in Criminology.

All students are required to participate in the Centre’s non-credit Research Seminar.

Combined Juris Doctor/Master of Arts

Law students who also want to pursue graduate work in criminology may undertake the combined JD/MA in Criminology degree program.

Minimum Admission Requirements

- Applicants must gain independent admission to both programs. Applicants may be admitted before they enter the JD program or while they are in the first year.
- Applicants wishing to apply to the Combined JD/MA program in Criminology should contact the Admissions Office, Faculty of Law, University of Toronto at (416) 978-3716.

Program Requirements

- **Year 1.** Students take the full first-year law program.
- **Years 2 and 3.** Over the course of the two combined years students must:
  - take 45 credits in the Faculty of Law;
  - satisfy the compulsory requirements of the upper years of the JD. These are a moot, an extended paper, and a perspective course;
  - take 3.0 FCE at the Centre of Criminology of which 0.5 FCE must be the required research methods course (CRI 2010H);
  - 1.0 FCE may be taken in the form of the Centre of Criminology’s Research Paper (CRI 3360Y).
  - Students must take a minimum of 1.0 FCE in Criminology in each of Years 2 and 3 of the program and may take a maximum of 2.0 FCE a year. The number of law school credits completed each year will be adjusted accordingly, the only requirement being that 45 are completed over the two years.
- Students must submit their programs for the approval of the Director of the Combined Program.

Doctor of Philosophy

Minimum Admission Requirements

- Applicants normally hold an MA degree in Criminology with a minimum A- standing, or its equivalent from a recognized university. Students from MA programs other than the University of Toronto’s MA in Criminology 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. Facility 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 TWE
  - Computer-based TOEFL exam: 237 and 5 on the essay rating component
  - 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 before a formal offer of admission can be made.

Program Requirements

- **Residency.** PhD students are required to be on campus full-time for the period of their program. Students are expected to participate in the Centre’s activities associated with the program.
- **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.
- **Course Requirements.** Students must complete a minimum of 2.0 full-course equivalents (FCE) beyond those taken at the MA level. Students must complete, at either the MA or the PhD level, the required research methods course (CRI 2010H). PhD students are also required to participate in the non-credit research seminar.
- **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. 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 in Criminology, with two other members of the graduate faculty serving on the thesis committee.
Degree Programs

Courses
All courses are half-courses (0.5 FCE), with the exception of the Research Paper (1.0 FCE). Not all courses are offered every year. Consult the Centre 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 before enrolling in any of the Centre’s graduate courses.

Required Course
CRI 2010H Methodological Issues in Criminology

Optional Courses
CRI 1020H Law and Society: Theoretical Perspectives
CRI 1050H Theories of Crime and Social Order
CRI 2020H Applied Statistics in Criminology
(Students may take this course or IRE 1002H Applied Statistics in Industrial Relations, but not both.)
CRI 3120H Politics and Crime
CRI 3130H Policing
CRI 3140H Special Topics in Criminology
CRI 3150H Crime, Law, and the State in Early Modern England, 1650-1850
CRI 3160H Historical Approaches to Crime and Justice in Canada
CRI 3240H Penology
CRI 3270H The Psychology of Criminal Behaviour: Theory and Practice
CRI 3310H Special Topics in Criminology
CRI 3320H The Criminal Process
CRI 3330H Contemporary Issues in Safety and Security
CRI 3340H Special Topics in Criminology
CRI 3350H Directed Research in Criminology
CRI 3355H Sentencing
CRI 3351H Directed Research in Criminology
CRI 3356H Youth Crime and Youth Justice
CRI 3357H Risk, Uncertainty, and Criminal Justice
CRI 3360Y* Research Paper

Graduate Faculty

Full Members
Anthony Doob - AB, PhD
Rosemary Gartner - BA, MS, PhD
Kelly Hannah-Mofatt - BA, MA, PhD
Ron Levi - BCL, LLB, LLM, SJ D

Michele Peterson-Badali - BA, MA, PhD, CPsych
James Phillips - MA, LLB, PhD
Kent Roach - BA, LLB, LLM
Peter Solomon - BA, MA, CertRussInst, PhD
Julian Tanner - BSc, PGCE, MA, PhD
Mariana Valverde - BA, MA, PhD, FRSC (Director)
N. Scot Wortley - BA, MA, PhD (Coordinator of Graduate Studies)

Members Emeriti
John Beattie - BS, MA, PhD, FRSC, University Professor Emeritus
Martin Friedland - BCom, LLB, PhD, LLD, OC, QC, FRSC, University Professor Emeritus

Associate Members
Sandra Bucerius, BA, MA
Mary Condon - BA, MA, LLM, SJD
Patricia Erickson - BA, MA, PhD
Joseph Hermer - BA, MA, DPhil
Matthew Light, BA, MA, JD, PhD
Michael Seto - BSc, MA, PhD, CPsych

* Courses which may continue over a program. The course is graded when completed.
Faculty Affiliation
Ontario Institute for Studies in Education

Degree Programs Offered
Curriculum Studies and Teacher Development - MEd, MA, PhD
Elementary and Intermediate Education - MT
Second Language Education - MEd, MA, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Comparative, International and Development Education, see p. 430
   • Curriculum Studies and Teacher Development, MA, MEd, PhD
   • Second Language Education, MA, MEd, PhD
2. Knowledge Media Design, see p. 462
   • Curriculum Studies and Teacher Development, MA, MEd, PhD
   • Second Language Education, MA, MEd, PhD
3. Women and Gender Studies, see p. 473
   • Curriculum Studies and Teacher Development, MA, MEd, PhD
   • Second Language Education, MA, MEd, PhD

Overview
The Department of Curriculum, Teaching, and Learning offers graduate programs in three areas of study:
1. Curriculum Studies and Teacher Development
2. Elementary and Intermediate Education
3. Second Language Education
   These programs reflect a variety of scholarly interests and are closely linked with the Department's strong research base.

Contact and Address
Admission
Initial enquiries regarding admission to graduate studies in the Department of Curriculum, Teaching and Learning (CTL) should be made directly to:
The Ontario Institute for Studies in Education of the University of Toronto (OISE/UT)
Registrar's Office
Graduate Studies, Admissions Unit
Fourth Floor, 252 Bloor Street West
Toronto, Ontario M5S 1V6
Canada
Program
Web: www.oise.utoronto.ca/depts/ctl/
E-mail: ctitquiries@oise.utoronto.ca
Telephone: (416) 978-0040
Fax: (416) 926-4744

Degree Programs
Curriculum Studies and Teacher Development
The Curriculum Studies and Teacher Development (CSTD) Program is a forum for systematic reflection on the substance (subject matter, courses, programs of study), purposes, and practices used for bringing about learning in educational settings. Of concern are such fundamental issues as: What should be studied? Why? By whom? In what ways? And in what settings? Reflection upon such issues involves an interplay among the major components of education: learners, subject matter, learning, teaching, and the larger social, political, and economic contexts as well as the immediate instructional situation. Curriculum Studies and Teacher Development Program course offerings and guided research opportunities reflect the diverse interests of faculty in a range of areas.

Curriculum Studies and Teacher Development Program faculty guide student work in a wide range of inquiry and data analysis methodologies, including qualitative and quantitative research, action research, naturalistic inquiry, teacher inquiry, performed and critical ethnography, and life history.
Interest areas reflect overlapping and intersecting areas of strength in the whole CSTD program, not separate sub-programs. Visit the list of CSTD research interests at www.oise.utoronto.ca/depts/ctl/programs_admissions01.htm. Faculty and students each pursue diverse overlapping combinations of these interests. To show the general dimensions of the CSTD program, the interest descriptors are arranged in three categories: broad perspectives on education in various contexts, curriculum content and pedagogy, and intersections of curriculum with particular diverse learners.

Master of Education
The MEd degree program is designed chiefly for the professional development of those who are already engaged in a career related to education.

Minimum Admission Requirements
• Applicants are accepted under the general regulations which specify an appropriate four-year University of Toronto bachelor’s degree, or its equivalent 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.
Ordinarily, applicants will have at least one year of relevant, successful, professional experience prior to applying.

In the Statement of Intent, 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 Statement of Intent, applicants should visit the Curriculum Studies and Teacher Development Program Web page (www.oise.utoronto.ca/depts/ctl/programs_admissions01.htm). The Admissions Committee reviews this Statement 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.

Program Requirements
- 5.0 full-course equivalents (FCE), of which at least 2.5 FCE are normally CTL 1000-level courses undertaken in the Curriculum Studies and Teacher Development Program. Students are required to successfully complete CTL 1000H.
- Additional study may be required either within the degree program or prior to admission, depending on previous experience and academic qualifications.
- The MEd may be taken on a full-time or part-time basis.
- All requirements for the degree must be completed within six calendar years from first enrolment.

Master of Arts
The MA degree program is designed to provide academic study and research training related to curriculum studies. 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.

Minimum Admission Requirements
- Applicants are accepted under the general regulations. Admission normally requires a four-year University of Toronto bachelor’s degree, or its equivalent, with a 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.
- Statement of Intent. Applicants should state the reasons they wish to undertake a research-oriented program of study in curriculum or teacher development. The chief academic interests and experience, professional concerns, and career plans related to an aspect of curriculum studies should be discussed. In order to identify their research interests in their Statement of Intent, applicants should visit the Curriculum Studies and Teacher Development Program Web page (www.oise.utoronto.ca/depts/ctl/programs_admissions01.htm). The Admissions Committee reviews this Statement to determine the kind of curriculum problem or area of study in which an applicant is most interested and to link the applicant to appropriate faculty advisors.

Program Requirements
- 4.0 full-course equivalents (FCE), of which at least 2.0 FCE are normally CTL 1000-level courses undertaken in the Curriculum Studies and Teacher Development Program.
- Additional courses may be required of some applicants, depending on previous experience and academic qualifications. Students are required to successfully complete CTL 1000H, and a course in research methods from an approved course listing. See listing of approved research methods courses at (www.oise.utoronto.ca/depts/ctl/programs_admissions01.htm).
- Thesis.
- The MA may be taken on a full-time or part-time basis.
- All requirements for the degree must be completed within five years from first enrolment.

Note: Students are responsible for meeting deadlines to complete their course requirements, thesis committee formation, and ethical review.

Doctor of Philosophy
The PhD is intended primarily as preparation for academic positions in universities; the program demands a strong commitment to curriculum research. The Curriculum Studies and Teacher Development Program offers both full-time and flexible-time PhD program options. Applicants must declare the option for which they wish to apply.

Minimum Admission Requirements

Full-time PhD
- Applicants are accepted under the SGS general regulations. A University of Toronto master’s degree in education with a grade of B+ or better, or its equivalent from a recognized university, 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 (www.oise.utoronto.ca/depts/ctl/programs_admissions01.htm).
  - A Statement of Intent describing their intellectual interests and concerns relevant to curriculum studies and teacher development, reasons for wishing to take the Program, previous qualifications and professional experiences, particular
research or professional interests, and future career goals.
  o Two letters of reference, one academic and one professional.

Flexible-time PhD
  • Applicants to the flexible-time PhD option are accepted under the SGS general regulations and are subject to the same admission requirements as applicants to the full-time PhD option.
  • However, in addition, applicants to the flexible-time PhD must include in their Statement of Intent the outline of a plan that demonstrates the applicant:
    o is in a career related to the field of study;
    o has three or more years with the same employer;
    o has a desire to continue with current career path;
    o has the capacity to secure blocks of time to enable concentrated study (e.g., reference to the employer’s leave policy, study incentive system, etc.)

Program Requirements
  • Degree requirements for the full-time and flexible-time options of the PhD are the same. Only the length of time to completion differs. Full-time PhD students must complete their degree within six years; flexible-time PhD students within eight years.
  • The PhD program normally consists of 3.0 full-course equivalents (FCE), of which at least 2.0 FCE are ordinarily CTL 1000-level courses. Additional courses may be required of some students.
  • Students are expected to take CTL 1000H if they did not complete it at the master’s level, and one course in research methods from an approved course listing. This listing is available at the CSTD Program Web page (www.oise.utoronto.ca/depts/ctl/programs_admissions01.htm).
  • Successful completion of a comprehensive examination.
    • A thesis, embodying the results of an original investigation, and a final oral examination on the content and implications of the thesis.

Note: Students are responsible for meeting deadlines to complete their course requirements, thesis committee formation, comprehensive examination, and ethical review.

Courses
  Not all courses are offered every year. Please consult the Department for course offerings.

CTL 1000H Fondements du l’étude des programmes scolaires
CTL 1000H Foundations of Curriculum Studies
CTL 1001H Values and Schooling
CTL 1002H Planification de la programmation pour un enseignement efficace
CTL 1002H Curriculum Development for Effective Teaching
CTL 1003H Language Arts in Primary Education
CTL 1005H Language, Literacy, and the School Curriculum
CTL 1007H Communities of Learning: Teachers Constructing Professional Knowledge
CTL 1008H Children’s Literature as a Foundation of Literate Behaviour Across the Curriculum
CTL 1009H Theory and Practice in Elementary Literacy Instruction
CTL 1010H Children’s Literature Within a Multicultural Context
CTL 1011H Anti-Discriminatory Education in School Settings
CTL 1012H Curriculum for Girls and Young Women: Historical and Contemporary Issues
CTL 1014H Evaluation of Curriculum and Instruction
CTL 1016H Cooperative Learning Research and Practice
CTL 1018H Introduction to Qualitative Inquiry in Curriculum, Teaching, and Learning
CTL 1019H Authentic Assessment
CTL 1020H Teaching High Ability Students
CTL 1023H Technology and Education: Critical Perspectives on Theory and Practice
CTL 1024H Poststructuralism and Education
CTL 1026H Improving Teaching
CTL 1027H Facilitating Reflective Professional Development
CTL 1028H Constructive Feedback in Teaching
CTL 1029H From Student to Teacher: Professional Induction
CTL 1031H Language, Culture, and Identity: Using the Literary Text in Teacher Development
CTL 1032H Knowing and Teaching
CTL 1033H Multicultural Perspectives in Teacher Development: Reflective Practicum
CTL 1036H Thoughtful Teaching and Practitioner Inquiry
CTL 1037H Teacher Development: Comparative and Cross-Cultural Perspectives
CTL 1038H Change and Curriculum Implementation
CTL 1039H Teaching Writing in the Classroom
CTL 1040H Fundamentals of Program Planning and Evaluation
CTL 1041H Research Methods in Education
CTL 1042H Instrument Development in Education
CTL 1043H Research Issues in Alternative Assessments
CTL 1045H Survey Research
CTL 1046H Training Evaluation
CTL 1047H Course-Self-Assessment
CTL 1060H Education and Social Development
CTL 1104H Play, Drama, and Arts Education
CTL 1105H Research and Inquiry in Arts Education
CTL 1106H Spirituality in Education
CTL 1110H The Holistic Curriculum
CTL 1115H Teacher Education and the Construction of Professional Knowledge: Holistic Perspectives
CTL 1116H Holistic Education Approaches in Elementary School Mathematics
CTL 1117H Liberatorary Practices in Drama and Education
Because applicants are applying to a teacher education program in Elementary and Intermediate Education, they should discuss three significant teaching and/or teaching-related experiences that they have had, especially with groups of children. 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.

Program objectives are achieved through a combination of course work, teaching and research seminars, internships and practica, along with independent and collaborative research and major research papers.

Minimum Admission Requirements
- Applicants are admitted under the general regulations of the School of Graduate Studies. Applicants must have the equivalent of a University of Toronto four-year bachelor’s degree with a mid-B or better in the final year.
- In their Statement of Intent, applicants should describe three significant teaching and/or teaching-related experiences that they have had, especially with groups of children. 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.
- Final selection will be based on an interview by a panel of faculty, teachers, and students. Given program limitations, not all eligible applicants are guaranteed admission.
- Because applicants are applying to a teacher education program, the following items must be submitted with the application:
  - a photocopy of a Canadian birth certificate, or in the case of a person who was not born in Canada, documents showing the basis upon which the applicant is present in Canada, including date and place of birth
  - a photocopy of a certificate of change of name where applicable
- A police record check is required for certification by the Ontario College of Teachers and is required in both the first and second year of the program.
Program Requirements

- The two-year MT degree requires 8.0 full-course equivalents (FCE), i.e., 16 half-courses (14 core and 2 elective half-courses), including practica.
- Students must successfully complete a comprehensive examination at the end of the program in order to graduate and receive the MT degree and a recommendation to the Ontario College of Teachers for an Ontario Teachers’ Certificate of Qualification.
- Normally, advanced standing is not granted in this program.
- The two-year program is undertaken on a full-time basis. Registration in the second year is contingent upon successful completion of all first-year work.

Courses

Core Courses - Year 1
- CTL 7000H Curriculum and Teaching in Literacy
- CTL 7002H Curriculum and Teaching in Mathematics
- CTL 7003H Curriculum and Teaching in Social Studies and Science
- CTL 7004Y Practicum in the Schools
- CTL 7006H Reflective Teaching and Inquiry into Research in Education
- CTL 7007H Authentic Assessment

Core Courses - Year 2
- CTL 7001H Educational Professionalism, Ethics and the Law
- CTL 7005Y Practicum Internship
- CTL 7008H Introduction to Special Education and Adaptive Instruction
- CTL 7009H Anti-Discriminatory Education
- CTL 7010H Issues in Numeracy and Literacy
- CTL 7011H Child and Adolescent Development

Elective Courses

Two elective courses are selected from course offerings in the Department of Curriculum Teaching and Learning. Choice of electives is contingent upon the approval of the student’s faculty advisor.

Second Language Education

Studies in Second Language Education (SLE) focus on curriculum, instruction, learning, and policies for education in second, foreign, and minority languages, particularly in reference to English and French in Canada but also other languages and settings, including studies of language learning, methodology and organization of classroom instruction, language education policies and planning, and student and program evaluation as well as issues related to bilingualism, multilingualism, cultural diversity, and literacy.

Master of Education

Minimum Admission Requirements

- Applicants are accepted under the general regulations which specify an appropriate four-year University of Toronto bachelor’s degree with a mid-B or better in the final year, or its equivalent from a recognized university.
- Ordinarily, applicants should have teacher certification and at least one year of relevant successful professional experience prior to applying.
- All applicants are required to submit a resume and a Statement of Intent describing their reasons for wishing to take the program, previous qualifications and professional experiences, particular research or professional interests, and future goals.

Program Requirements

- The MEd program consists of 5.0 full-course equivalents (FCE). A minimum of 2.5 FCE CTL 3000-level courses must be taken within the SLE program. Of these, 1.0 FCE are required ME courses and must be selected from the following list:
  - CTL3000H Foundations of Bilingual and Multicultural Education
  - CTL3002H Second Language Teaching Methodologies
  - CTL3003H Planning and Organizing the Second Language Curriculum
  - CTL3010H Second Language Learning
- The MEd program of study may be taken on a full or part-time basis. All requirements for the degree must be completed within six calendar years from first enrolment.

Master of Arts

Minimum Admission Requirements

- Applicants are accepted under the general regulations. Admission requires a four-year University of Toronto bachelor’s degree with a mid-B or better in the final year, or its equivalent, in a relevant discipline or professional program.
- Ordinarily, applicants should have teacher certification and at least one year of relevant successful professional experience prior to applying.
- Enrolment in the MA (rather than MEd) program is advisable for applicants expecting to pursue a doctorate in the future.
- All applicants are required to submit a resume and a Statement of Intent describing their reasons for wishing to take the program, previous qualifications and professional experiences, particular research or professional interests, and future career goals.
Degree Programs

Program Requirements
- The MA program may be undertaken on a full-time or part-time basis.
- The program requires 8.0 full-course equivalents (FCE) plus a thesis.
- Students must take a minimum of 2.0 FCE CTL 3000-level courses within the SLE program. Courses must include CTL 301H. Part-time students are expected to be available to take CTL 301H during day-time hours (usually Friday afternoons).
- Students must also take a course in research methods relevant to the topic of the thesis. Any of the following courses can fulfill this requirement: CTL 1018H, CTL 1030H, CTL 1041H, CTL 1306H, CTL 1810H, CTL 1842H, CTL 3019H, CTL 3800H, CTL 3803H, CTL 3807H, AEC 1400H, HDP 1287H, HDP 1288H or SES 1905H. Students wishing to propose an alternative course to fulfill one of the SLE course requirements will be required to obtain the approval of both the SLE graduate program coordinator and either their faculty advisor or their thesis supervisor.
- Students are responsible for meeting deadlines to complete their course requirements, thesis committee formation, and ethical review.
- Additional courses may be required of some applicants. All requirements for the degree must be completed within five calendar years from first enrolment.

Doctor of Philosophy
Individuals pursuing the PhD typically aspire to be university professors in this field. The SLE program offers both full-time and flexible-time PhD options. Applicants must declare their preferred option when applying.

Minimum Admission Requirements
Full-time PhD
- Applicants are accepted under the SGS general regulations. A University of Toronto master's degree with a grade of B+ or better, or its equivalent 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 relevant professional experience prior to applying.
- All applicants are required to submit a resume and a Statement of Intent describing their reasons for wishing to take the Program, previous qualifications and professional experiences, particular research or professional interests, and future career goals.

Flexible-time PhD
- Applicants to the flexible-time PhD option are accepted under the SGS general regulations and are subject to the same admission requirements as applicants to the full-time PhD option.
- In addition, applicants to the flexible PhD must include in their Statement of Intent the outline of a plan that demonstrates the applicant:
  - is in a career related to the field of study;
  - has three or more years with the same employer;
  - has a need and desire to continue with current career path;
  - has the capacity to secure blocks of time to enable concentrated study (e.g., reference to the employer's leave policy, study incentive system, etc.).

Program Requirements
- Degree requirements for the full-time and the flexible-time PhD programs are the same.
- The PhD requires 3.0 to 4.0 full-course equivalents (FCE) depending on previous experience and academic qualifications.
- Students must take a minimum of 2.0 FCE CTL 3000-level courses within the SLE Program including CTL 3801H Research Colloquium in Second Language Education, Doctoral Level (unless they have previously taken CTL 3001H Research Colloquium in Second Language Education, Master's Level), as well as a research methods course relevant to the topic of the thesis. Any of the following courses can fulfill this requirement: CTL1018H, CTL1030H, CTL 1041H, CTL 1306H, CTL 1810H, CTL 1842H, CTL 3019H, CTL 3800H, CTL 3803H, CTL 3807H, AEC 1400H, HDP 1287H, HDP 1288H, SES 1905H.
- Comprehensive examinations.
- A thesis embodying the results of an original investigation, and a final oral examination on the content and implications of the thesis.
- A student wishing to propose an alternative course to fulfill one of the SLE course requirements will be required to obtain the approval of the SLE Program coordinator and either her or his faculty advisor or thesis supervisor.
- Full-time PhD students must complete their degree within six years. A minimum of two consecutive years of full-time study are required at the beginning of the program, during which time students usually complete course requirements, pass the comprehensive examination, prepare a thesis proposal, and form a thesis committee.
- Flexible-time PhD students must complete their degree within eight years. Students may apply for part-time status after four years of full-time registration.

Courses
Not all courses are offered every year. Please consult the Department for course offerings.

Master's Level
JHC 1251H Reading in a Second Language
JTE 1952H Language Culture and Education/M. Heller
CTL 3000H Foundations of Bilingual and Multicultural Education

144 Curriculum, Teaching, and Learning
CTL 3001H Research Colloquium in Second Language Education: Master's Level
CTL 3002H Second Language Teaching Methodologies
CTL 3002Y Methodology and Organization of Second-Language Teaching
CTL 3003H Planning and Organizing the Second Language Curriculum
CTL 3004H Language Awareness and its Role in Teacher Development
CTL 3005H Current Issues in English as a Second Language
CTL 3007H Discourse Analysis
CTL 3007H Séminaire sur le langage et la communication
CTL 3008H Critical Pedagogy, Language, and Cultural Diversity
CTL 3010H Second-Language Learning
CTL 3011H Bilingual Education and Bilingualism
CTL 3011H Bilinguisme et éducation ou membre de la faculté à déterminer
CTL 3012H Communicative Competence
CTL 3013H Second Language Assessment
CTL 3015H Seminar in Second-Language Literacy Education
CTL 3018H Language Planning and Policy
CTL 3018H Politique et aménagement linguistique
CTL 3019H Research Themes in Canadian French as a Second Language Education
CTL 3020H Writing in a Second Language
CTL 3021H Pedagogical Grammar of French
CTL 3023H Sociolinguistique du français canadien
CTL 3024H Second Language Teacher Education
CTL 3797H Praticum Second Language Education: Master's Level
CTL 3798H Individual Reading and Research in Second Language Education: Master's Level
CTL 3799H Special Topics Second Language Education: Master's Level

Doctoral Level
CTL 3800H Second Language Classroom Research
CTL 3801H Research Colloquium in Second Language Education: Doctoral Level
CTL 3803H Ethnographic Research in the Language Disciplines
CTL 3805H Aspects of Second-Language Acquisition
CTL 3806H Sociocultural Theory and Second Language Learning
CTL 3807H Processing Second Language Data
CTL 3808H The Role of Instruction in Second Language Learning
CTL 3809H Research Seminar in Sociocultural Theory and Second Language Learning
CTL 3997H Praticum Second Language: Doctoral Level
CTL 3998H Individual Reading and Research in Second Language: Doctoral Level
CTL 3999H Special Topics in Second Language Program: Doctoral Level

Graduate Faculty

Full Members
Mary Beattie - BA, MA, MEd, EdD
Lawrence Benzie - BSc, BEd, MSc, PhD
Barrie Bennett - BPE, MEd, PhD
Kathy Bickmore - BA, MA, PhD
M. Clare Brett - BA, MA, PhD
Linda Cameron - BA, MEd, EdD
Elizabeth Campbell - BA, BEd, MEd, PhD (Associate Chair, Graduate Studies)
Rina Cohen - MSc, PhD
Carola Conle - BA, MA, PhD
Karyn Cooper - BA, MA, PhD
Alister Cumming - BA, MA, PhD
James Cummins - BA, PhD
Marcel Danesi - BA, MA, PhD, FRSC
Lynn Davie - Professor Emeritus
Colin Diamond - BA, PhD
Lorna Earl - PhD
Joseph Farrell - BSc, PhD
Grace Feuerverger - BA, MA, PhD
Antoinette Gagne - BEd, MEd, PhD
Kathleen Marie Gallagher - BA, BEd, MEd, PhD
Diane Gerin-Lajoie - BSc, MA, PhD
Tara Goldstein - BA, PhD (Chair)
James Hewitt - BM, BEd, MEd, PhD
Derek Hudson - BSc, MEd, PhD
Julie Kerekes
Brent Kibbourn - BS, MA, PhD
Mary Kooy - BA, MA, PhD
Clare Kosnik - BA, BEd, MEd, PhD
Normand Labrie - BA, MA, PhD
Tony Lam - BA, PhD
Douglas McDougall - BEd, BM, MEd, EdD
John Miller - BA, MAT, PhD
Martina Nieswandt - BA, MA, PhD
Erminia Pedretti - BSc, BEd, MEd, PhD
N Carol Rolheiser - BEd, MEd, PhD
John Ross - BA, MA, PhD
Marlene Scardamalia - BA, MS, PhD
Linda Siegel - BA, MS, PhD
Roger Simon - BS, PhD
James Slotta
Elizabeth Smyth - BA, BEd, MA, EdD
Nina Spada - BA, MA, PhD
Shelley Stagg Peterson - BA, BEd, MEd, PhD
Heather Sykes - BSc, PGCE, MEd, PhD
Dennis Thiessen - BA, BEd, DPhil
Peter Trifonas - BA, BEd, MA, PhD
Merlin Wahlstrom - BEd, MEd, PhD
John Wallace
Dale Willows - BA, MA, PhD, CPsych
David Wilson - Professor Emeritus
Richard Wolfe - BA

Curriculum, Teaching, and Learning
Members Emeriti
Johan Aitken - PhD
Patrick Allen - BA, MA, PhD
Clive Beck - Professor Emeritus
Deanne Bogdan - BA, MA, PhD
David Booth - BA, MEd
Stacy (Jr.) Churchill - PhD
Michael Connelly - BEd, BSc, MSc, PhD
Vivian Darroch-Lozowski - Professor Emeritus
Normand Frenette - BA, MA, MEd, PhD
Gila Hanna - BA, MA, MEd, PhD
Birgit Harley - BA, MA, PhD, CCDF
Anne Jordan - BA, MA, PhD
Brendan Kelly - BSc, MSc, PhD, EdD
Sharon Lapkin - BA, MA, PhD
Robert Logan - BSc, PhD
Philip Nagy - BSc, MEd, PhD
Shizuhiko Nishisato - BA, MA, PhD
Ronald Silvers
Merrill Swain - BA, PhD
Ross Traub - PhD

Associate Members
Guy Allen - BA, MA, PhD
Eucline Alleyne
Lee Bartel - BA, BMus, MEd, PhD
Judith Bernhard - BA, MEd, PhD
Maria Jose Botelho
Kathy Broad
Barbara Burnaby - PhD
Niall Byrne - Dr.
Rex Collins - BA, MEd, PhD
Bernadette Dean
Tracey Derwing - BA, MSc, PhD
Jackie Eldridge
Mark Evans
Sandra Folk
Robert Fox - BS, MS, EdD
Monika Kin Gagnon - BA, MA, PhD
Ruben Gaztambide-Fernandez
Wanja Gitari
Ming Fang He - BA, MA, MEd, PhD
Rena Helms-Park - BA, MA, PhD, TESL
Daphne Heywood
Ian Hunday - BA, MA
John Hurst - PhD
Eunice Jang
Mayumi (Yuki) Johnson - BA, MA, PhD
Ron Lancaster
Alex Lawson - PhD MEd BA Bed
Xin Li - BA, MA, PhD
Richard Macleure - PhD, MA, PGC Ed
Cathy Marks-Krpan
Vandra Lea Masemann
Lance McCready
David Montemurro
Louise Nasmith - BA, MED
Marla Nayer
Sarfaroz Niyozov
Aneta Pavlenko - BA, PhD, MA, BA
Randall Penfield - PhD, MA, BSc

Margaret Procter
Katherine Rehner - PhD
Miriam Frances Rossi
Nick Scarfo
Wayne Seller - BA, MEd
Lesley Shore - BA, DIP ED, MED, EbD
Jeffrey Steele - BA, MA, PhD
Leslie Stewart Rose
Suzanne Stiegelbauer - BS, AM, MA, PhD
Albert Taylor
Sharon Todd
Miles Turnbull - BA, MA, PhD
Ema Ushioda - BA, MPh, PhD
Earl Woodruff - BSc, BEd, MA, PhD
Degree Programs

Dentistry DEN

Faculty Affiliation
Dentistry

Degree Programs Offered
Dentistry – MSc, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Aging, Palliative and Supportive Care Across the Life Course, see p. 408
   • Dentistry, MSc, PhD
2. Cardiovascular Science, see p. 426
   • Dentistry, MSc, PhD
3. Biomedical Engineering, see p. 418
   • Dentistry, MSc, PhD
4. Neuroscience, see p. 466
   • Dentistry, MSc, PhD
5. Women’s Health, see p. 478
   • Dentistry, MSc, PhD

Overview
The Faculty of Dentistry offers a graduate program leading to either a Master of Science or Doctor of Philosophy degree. This graduate program appeals to:
1. applicants who have a degree in dentistry and who are pursuing research training and advanced clinical education leading to qualification in one of ten dental specialty disciplines; and
2. applicants, both dentists and non-dentists, who are pursuing graduate research training without advanced clinical education.
Consequently, both the Master of Science and the Doctor of Philosophy degrees have a common core of course work and consist of three options, with each having varying additional research and training requirements.

Contact and Address
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Graduate Department of Dentistry
124 Edward Street
University of Toronto
Toronto, Ontario M5G 1G6
Canada

Degree Programs

Master of Science

1. Thesis Option

Minimum Admission Requirements
• Four-year Bachelor of Science degree, Doctor of Dental Surgery, or an equivalent degree, with at least mid-B standing in the final year from a recognized university in a discipline appropriate to the field of dentistry.

Program Requirements
• Ordinary one year of full-time registration; however, it is the Department’s expectation that students will normally remain in full-time attendance on campus to enable full participation in departmental activities for two years.
• Year 1 - development of a research project and proposal, and course work. Course work will normally include, as a minimum, fulfillment of the requirements for the course DEN 1001Y Master’s Seminars in Oral Health Sciences and successful completion of an additional 0.5 full-course equivalent (FCE). Exemptions may be granted for previously completed course work at the bachelor's level.
• Year 2 – research, thesis completion, and defence.

2. Specialist Dental Training - Thesis Option
The Department offers a Master of Science degree for dental graduates seeking advanced training in a clinical specialty as well as training in research.

Minimum Admission Requirements
• Doctor of Dental Surgery or an equivalent degree, with at least a mid-B standing in the final year from a recognized university.

Program Requirements
• Two to four years of full-time registration, depending upon the clinical specialty.
• Completion of an original research project culminating in the oral defence of a written thesis.
• Completion of clinical and didactic course work requirements as necessary to meet Canadian Dental Association accreditation requirements for the chosen clinical specialty.
• Course DEN 1001Y Master’s Seminars in Oral Health Sciences for a minimum of one year.
• Upon completion of all program requirements, students are eligible for the MSc degree and for Specialty, Fellowship, or Board Certification in the chosen dental specialty. For further information, consult the Faculty of Dentistry Calendar or Web site.

Courses which may continue over a program. The course is graded when completed.
3. Specialist Dental Training - Course Work Only Option
The Department offers a Master of Science degree for dental graduates seeking advanced training in a clinical specialty in which additional course work is undertaken as an alternative to a thesis. The availability of this option will vary by specialty.

Minimum Admission Requirements
- Doctor of Dental Surgery, or an equivalent degree, with at least a mid-B standing in the final year from a recognized university.

Program Requirements
- Two to four years of full-time registration, depending upon the clinical specialty.
- Completion of all clinical and didactic course work requirements as necessary to meet Canadian Dental Association accreditation requirements in the chosen dental specialty.
- Course DEN 1001Yº Master’s Seminars in Oral Health Sciences for a minimum of one year.
- 1.5 full-course equivalents (FCE) in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice, and a research practicum and successful completion of an oral examination of the research practicum.
- Upon completion of all program requirements, students are eligible for the graduate degree and for Specialty, Fellowship, or Board Certification in the chosen dental specialty. For further information, consult the Faculty of Dentistry Calendar or Web site.

Program Transfer - MSc to PhD
MSc students pursuing either of options 1 or 2, who are demonstrating excellent progress in all facets of their program, may apply to transfer from the MSc to the PhD program. Transfer time varies for students in the specialty training thesis option. The transfer examination will take place up to 18, and in exceptional circumstances, 24 months after entry into the MSc program for registrants in the MSc Thesis Option. Regulations governing such transfers are available from the Graduate Department of Dentistry.

Students registered in the specialty training course-work only option will not be permitted to transfer to the PhD degree, but may apply to the PhD program following completion of the MSc degree.

Doctor of Philosophy

1. Full-Time Research Option

Minimum Admission Requirements
- Students are normally admitted to a four-year PhD program with an appropriate master’s degree, or equivalent, with at least an A standing from a recognized university in a discipline appropriate to the intended field of doctoral study. However, under exceptional circumstances, the Department may admit a highly qualified student with an appropriate four-year Bachelor of Science degree in a discipline appropriate to the field of dentistry or a Doctor of Dental Surgery degree with at least an A standing from a recognized university.

Program Requirements
- Students undertake customized programs, approved by an advisory committee and the Graduate Chair of Dentistry, comprising advanced study and original research culminating in the defence of a thesis.
- Minimum course requirements - completion of the course DEN 1100Yº Doctoral Seminars in Oral Health Sciences, plus an additional 1.0 full course equivalent (FCE).
- Exemptions may be granted for MSc course work from closely related disciplines. This includes students transferring from MSc to PhD programs. Programs of study for BSc students will normally include additional course work requirements.
- Although the minimum residency requirement is one year, it is the Department’s expectation that students will normally remain on campus for four years.
- After 12 months and within 24 months of starting a PhD program, students must pass a qualifying oral examination to demonstrate an adequate capacity for oral health sciences research through previous work and will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in timely fashion.
- Participate as members of departmental and student committees as applicable.
- Consult with the Graduate Chair of Dentistry who will appoint a committee to plan and arrange their course work and research programs. The committee and the Graduate Chair must approve the entire course of study. The student’s supervisor will chair the committee. The committee will closely monitor the student’s ability to sustain satisfactory performance and will report annually to the Graduate Chair for approval and continuance of candidacy.
2. Full-Time Program Combined with Dental Specialty Training Option

The Department offers a Doctor of Philosophy degree for exceptional dental graduates seeking to combine a PhD degree with advanced training in a clinical specialty. Applicants intending to train as clinician/scientists, aspiring to teaching and research careers in the dental field, are considered on an individual basis.

Minimum Admission Requirements

- Doctor of Dental Surgery degree with at least an A standing from a recognized university. Evidence of research experience or research potential is normally required.

Program Requirements

- Completion of an original research project culminating in the oral defence of a thesis.
- Completion of the course DEN 1100Y: Doctoral Seminars in Oral Health Sciences, plus an additional 1.0 full-course equivalent (FCE), together with, for the chosen clinical specialty, completion of clinical and didactic course work requirements.
- Consult with the Graduate Chair of Dentistry who will appoint a committee to plan and arrange their course and research programs. The committee and the Graduate Chair must approve the entire course of study. The student's supervisor will chair the committee. The committee will closely monitor the student's ability to sustain satisfactory performance and will report semi-annually to the Graduate Chair of Dentistry for approval and continuance of candidacy.
- After 12 months and within 24 months of starting the PhD program, students must pass a qualifying oral examination to demonstrate an adequate capacity for oral health sciences research through previous work and will be examined on their thesis proposal and their breadth of knowledge relative to the research project.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in timely fashion.
- Participate as members of departmental and student committees as applicable.
- The addition of the clinical and didactic courses for a clinical specialty will normally increase the amount of time for the PhD degree by two years, depending upon the particular clinical specialty undertaken. Program completion will be contingent upon completion of all requirements for the research and specialty training components of the program.
- Upon completion, students are eligible for the graduate degree and for Specialty, Fellowship, or Board Certification in one of the dental specialties. For further information, please consult the Faculty of Dentistry Calendar or Web site.

3. Flexible-Time Option

The Department offers a flexible-time PhD program for selected students whose career goal is a full-time academic position in a clinical discipline. Students concurrently establish their teaching and academic credentials. The major goal upon program completion is to enable students to compete for university tenure-stream professorial positions in their clinical science discipline. The program is dedicated to research experience and, therefore, does not involve clinical training other than clinical research methodology. It entails completion of the research and course work requirements for the PhD degree half time, while teaching in a clinical discipline half time.

Minimum Admission Requirements

- School of Graduate Studies and Graduate Department of Dentistry admission requirements for entry to the PhD program.
- A professional degree equivalent to the University of Toronto DDS. and a graduate degree equivalent to the University of Toronto MSc. Preference given to:
  - applicants who have completed specialty education equivalent to the standard required for licensure as a specialist by the Royal College of Dental Surgeons of Ontario and
  - applicants who hold a university appointment in Canada at an academic standard equivalent to the University of Toronto Lecturer.

Program Requirements

- Appropriate research supervision and advisory committee membership, customized plan of study, and timetable for the completion of the degree requirements, as approved by the Graduate Chair of Dentistry, will be in place at program commencement. The Graduate Chair monitors progress by review of completed advisory committee reports based on annual meetings of the student with the supervisory committee.
- Although the minimum residency requirement for the PhD is one year, the anticipated completion date for the flexible-time PhD program will be within five to six years from the registration date. The maximum time for completion will normally be eight years.
- Students are required to conduct research leading to completion and defence of a thesis and complete minimum course work requirements, which include DEN 1100Y: Doctoral Seminars in Oral Health Sciences, plus an additional 1.0 full-course equivalent (FCE).
- Students must pass a qualifying oral examination 12 to 24 months after commencement to demonstrate an adequate capacity for oral health sciences research at the doctoral level.
- Participate in all graduate research activities of the advisor's research group.
- Present at meetings and publish original research findings in timely fashion.
- Participate as members of departmental and student committees as applicable.

Courses which may continue over a program. The course is graded when completed.
Degree Programs

Courses
Not all courses are offered every year. The Department should be consulted each session as to course offerings.
DEN 1001Y and DEN 1100Y, designed to enhance critical analysis and presentation skills, involve seminars on faculty and student research, research ethics, critiques on student presentations, and participation in Research Day. These seminars are required as part of the program for all MSc and PhD students.

DEN 1001Y Master's Seminars in Oral Health Sciences (Credit/No Credit)
DEN 1002H Oral Pathology
DEN 1003H Preventive Dentistry
DEN 1006Y Seminars in Dental Public Health
DEN 1007H Oral Radiology
DEN 1011Y Advanced Seminars in Oral Pathology
DEN 1012Y Oral Medicine
DEN 1013Y Oral Surgical Pathology
DEN 1016H Occlusion: Function and Dysfunction
DEN 1017H Temporomandibular Disorders
DEN 1022H Investigating Pathogenic Biofilms
DEN 1024H Experimental Methods in Caries Research
DEN 1030H Critical Appraisal and Evidence-Based Care
DEN 1040Y Dental Clinical Epidemiology and Biostatistics
DEN 1051Y Oral Epidemiology
DEN 1060H Oral Physiology: Sensory and Neuromuscular Function
DEN 1070H Advances in Dental Materials Science
DEN 1080Y Biology of Connective Tissues
DEN 1081H Bone Interfacing Implants
DEN 1082H Biomaterials for Implant Treatment in Dentistry
DEN 1097Y Advanced Oral Radiology
DEN 1098H Reading Course in Oral Biology
DEN 1100Y Doctoral Seminars in Oral Health Sciences (Credit/No Credit)

Graduate Faculty

Full Members
Anne Agur - BSc, MSc, PhD
Jane Aubin - BSc, PhD
Debora E Barrett Foster - BSc, MSc, PhD
Tim Bressmann - MA, MSc, PhD
Michael Casas - DDS, DipPaedo, MSc
Robert Casper - MD, FRCSC
Cameron Clokie - DDS, DipOral & Maxillofacial Surg, PhD, DipABOMS
Dennis Cvtikovitch - BSc, MSc, PhD, Canada Research Chair (Coordinator of Graduate Studies)
John Davies - BSc, PhD, BDS, DSc
Douglas Deporter - DDS, PhD, DipPerio
Jonathan Dostrovsky - BSc, MSc, PhD
Richard Ellen - DDS, CertPerio, CertOralMed & Microbio
Omar El Mowafy - DDS, PhD, FADM
Edward Fillyer - BSc, PhD
Shimon Friedman - DMD
Michael Glogauer - DDS, Cert Perio, PhD
Siew-Ging Gong - BDS, CertOrtho, MA, PhD
Marc Grynpas - MSc, PhD
James Hu - BSc, MA, PhD
Asbjorn Jokstad - DDS, MSc, PhD
David Kenny - BSc, DDS, DipPaedo, PhD
Ernest Lam - BSc, DMD, MSc, CertOMRad, PhD
Herenia Lawrence - DDS, CertFRestorDentistry, CertFPla
ningSystems & ServDentCare, MSc, PhD
James Leake - MSc, DDS, DPHTH, FRCDC
Hardy Limeback - BSc, DDS, PhD
David Locker - BDS, PhD (Associate Dean)
Morris Manolson - BS, PhD
Christopher McCulloch - BSc, DDS, PhD, FRCDC
George Sandor - DDS, MD, PhD
Paul Santerre - BSc, MScEng, PhD
Zé'ev Seltzer - DMD, Canada Research Chair
Barry Sessle - BDS, BSc, MSD, PhD, FRSC, Canada Research Chair
Arun Seth - BSc, MSc, PhD
Philip Sherman - MD, FRCP(C), Canada Research Chair
Craig Simmons - BSc, MSc, PhD, PEng, Canada Research Chair
Howard Tenenbaum - DDS, DipPerio, PhD, FRCDC
Xian-Min Yu - MD, MSc, DScH
Ron Zohar - DMD, PhD, FRCDC

Members Emeriti
Anders Bennick - MSc, DDS, PhD, DipPerio
Ralph Burgess - BSc, MSc, DDS
Johannes Heersche - BSc, PhD
John Mayhall - BA, MA, DDS, PhD
Robert Pilliar - BASc, PhD, PEng
Robert Bruce Ross - DDS, MScD, DICORH, FRCDC
Philip Watson - DDS, MScD
Donald Woodside - BSc, DDS, MScD, PhD, FADM
George Zarb - BChD, MSc, DDS, MSc, FRCDC

Associate Members
James Anderson - BSc, DDS, MScD
Paul Andrews - BSc, DDS, Dip Paedo, MSc, FRCDC
Gerald Baker - DDS, MS, FRCDC, FICD
Edward Barrett - BSc, DDS, DipPaedo, MSc
Issac Barzilay - DDS, CertProsthodontics, MS
Bettina Basrani - DDS, DipEndo, PhD
Grace Bradley - MSc, DDS, FRCD
Lori Burrows - BSc, PhD
Sela Chelfetz - PhD
Thuan Dao - MSc, DMD, DipProsthodontics, PhD
I. John Daskalogiannakis - DDS, Cert Ortho, MSc
Laura Dempster - BSc, MSc, PhD
Randa Diwan - BDS, PhD
Wafa El Badrawy - DDS, MSc
Aaron Fenton - MS, DDS, DipProsthodontics, FRCDC

*Courses which may continue over a program. The course is graded when completed.
Yoav Finer - DMD, MSc, PhD, MSc (Prosthodontics)
Bernhard Ganss - BSc, MSC, PhD
Michael Goldberg - BSc, MSc, DDS, Dip Perio
Daniel Haas - BSc, BSscD, DDS, PhD, FADSA, FRCD(C)
Howard Holmes - DDS, Dip OMS
Peter Judd - BSc, DDS, DipPaedo, MSc
Gajanan Kulkarni - BDS, LLB, MSc, DipPaedo, PhD
Leslie Laing Gibbard - BSc, BEd,MSc,PhD,DDS,
MSc(Prosthodontics),FRCD(C)
Audrey Laporte - PhD
Iona Leong - BSc, BDS, DipOP&M, MSc
Celine Levesque - BSc, MSc, PhD
Patricia Main - BDS, DDS, DDPH, MSc, FRCD(C)
Dorothy McComb - BDS, MScD, FRCD(C)
Richard McComb - BDS, MSc, FRCD(C), DipABOP
Angelos Metaxas - DDS, DipOrtho, MSc, DDent
Sean Peel - BSc, PhD
Michael Pharoah - BSc, DDS, MSc, DipOralRad,
FRCD(C)
Brett Saltzman - BA, DDS, MSc (Paediatric Dentistry)
Michael Sigal - DDS, MSc, DipPaedo, FRCD(C)
Eli Sone - PhD, MS, BSc
Sanjay Suri - BDS,MDS,M Orth,RCS
Susan Sutherland - BScN, DDS, MSc
Reena Talwar - BSc, DDS, PhD, Certif OMS
Laura Tam - DDS, MSc
Keith Titley - BDS, LDS, RCS, DipPaedo, FRCD(C),
MScD
Bryan Tompsoon - DDS, DipPaedodont, DipOrthodontics
Robert Wood - DDS, MSc, DipOralRad, PhD, FRCD(C)
**Degree Programs**

**Doctor of Medicine/Doctor of Philosophy**
*(Combined Program)*

**Faculty Affiliation**

Medicine

**Degree Programs Offered**

*Medicine – Combined MD/PhD*

**Overview**

The MD/PhD program is offered jointly by the Faculty of Medicine and the School of Graduate Studies. Selected and highly qualified students have the opportunity to combine their medical school experience with intensive scientific training in a chosen field. Students in this program are eligible for financial support.

Students carry out research under the supervision of a faculty member at the University and should consult the appropriate department or institute regarding specific research programs.

**Contact and Address**

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*E-mail: mdphd.program@utoronto.ca*

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*Fax: (416) 971-2132*

MD/PhD Program

Medical Sciences Building

Room 7205

University of Toronto

Toronto, Ontario M5S 1A8

Canada

**Degree Programs**

**Combined Doctor of Medicine/Doctor of Philosophy**

**Minimum Admission Requirements**

- Applicants must be accepted by the Faculty of Medicine and meet the requirements of the School of Graduate Studies and the department in which they intend to carry out their graduate studies.
- Master's students or first-year medical students are eligible to apply.

**Program Requirements**

- Applicants may pursue the dual degrees via an **integrated** or a **sequential** route.
- **Integrated.** Students with a four-year bachelor’s degree enter the MD/PhD program and, within a period not exceeding six years, complete the requirements of the first two years of the MD program and all requirements of the PhD program. During this time a predetermined program of integration is pursued which provides time allocation for both medical school and graduate study. On completion of the PhD degree, students return full time to the medical program.
- **Sequential.** Students with a four-year bachelor’s degree enter the medical program on a full-time basis. After 18 months of medical school, they proceed to full-time graduate work until completion of the PhD degree. Students then return to medical school to complete the last 2.5 years.
Degree Programs

Drama  DRA

Faculty Affiliation
School of Graduate Studies

Degree Programs Offered
Drama – MA, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Sexual Diversity Studies, see p. 469
   • Drama, MA, PhD
2. Women’s and Gender Studies, see p. 473
   • Drama, MA, PhD

Overview
The Centre for the Study of Drama 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 theatre history, dramatic theory, and dramaturgy. Within the parameters of these fields, the Centre supports research in such areas as performance analysis and reception; Canadian, American, feminist and post-colonial theatre; Elizabethan and Restoration staging; historiography and performance; acting and modern staging theories and practices; and play development. Through affiliations with other graduate units, students may also take courses in drama and theatre from the departments of Classics; Comparative Literature; Curriculum, Teaching and Learning; English; French; German; Italian; Slavic; and Spanish. Access to courses from other departments relevant to a student’s particular research - e.g., in history, music, or anthropology - also may be arranged.

Graduate students build on the kind of foundation that would normally be laid in four years of undergraduate study with a concentration in dramatic literature. Theatre is an integral part of graduate work in the Centre and it takes place, for the most part, in the context of workshops, student productions, and co-productions at the Robert Gill and Studio theatres.

Application details are available on the Centre’s Web site and at http://apply.sgs.utoronto.ca.

Contact and Address
Web: www.graddrama.utoronto.ca
E-mail:
General: graduate.drama@utoronto.ca
Coordinator of Graduate Studies: gradcoord.graddrama@utoronto.ca
Telephone: (416) 978-7980
Fax: (416) 971-1378

Centre for Study of Drama
Koffler Student Services Centre
214 College Street
University of Toronto
Toronto, Ontario M5T 2Z9
Canada

Degree Programs

Master of Arts

Minimum Admission Requirements
• Applicants for admission to the Centre are considered under the general regulations. Admissions are selective; possession of minimum qualifications does not guarantee acceptance.
• Four-year University of Toronto BA with at least a B+ standing with a significant concentration in drama, or its equivalent from a recognized university.

Program Requirements
• At least 3.5 full-course equivalents (FCE), as approved by the Centre, including DRA 1003Y: Introduction to Theatre, Drama, and Performance Studies.
• At least one academic year or twelve months in full-time study, or the equivalent in part-time work.
• Satisfy the Centre’s requirements of practical work in the theatre by completing DRA 5000Y.
• The Centre may prescribe certain courses in the individual programs of MA students.
• Normally the program requires one year of full-time study or the part-time equivalent. In some cases, students may be admitted to a two-year MA program, with additional course requirements.

Doctor of Philosophy

Minimum Admission Requirements
• Applicants for admission to the Centre are considered under the general regulations. Admissions are selective; possession of minimum qualifications does not guarantee acceptance.
• Applicants may be accepted into the PhD program via one of two routes:
  o With a Master of Arts degree: University of Toronto MA in the Centre for the Study of Drama, or the equivalent from a recognized university, with at least an A- average standing. Applicants who have taken the MA through the Centre must be recommended for further study by the instructors whose courses they have taken. Applicants holding the MA of this University in a subject other than drama, or its equivalent from another university, will be considered for admission to the PhD program in the light of their previous work and its relation to the Centre’s requirements; additional course work may be required.
Degree Programs

- With a Bachelor of Arts degree: Exceptional students may be admitted directly to the PhD program from the BA with a minimum A- overall average.
- Applicants must arrange to send two supporting letters of recommendation to the Graduate Coordinator of the Centre. Admission will be conditional upon satisfactory recommendation.
- Applications must be accompanied by a statement of research intent and curriculum vitae.

Program Requirements

- Students entering with a MA:
  - complete 4.0 full-course equivalents (FCE) with an average standing of at least A-. The courses must include the dramaturgical requirement, DRA 1011H Traditions of Performance Theory, DRA 1012H 20th-Century Theatre and Performance, and DRA 6000Y Research Seminar;
  - demonstrate reading knowledge of a language other than English by passing an approved language examination not later than the end of the second year of study. Students may also be asked to qualify in other program-related languages;
  - satisfy the Centre’s requirement of further practical work in the theatre by completing DRA 5001Y;
  - pass comprehensive examinations;
  - 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.
- Students entering with a BA:
  - Complete 4.0 full-course equivalents (FCE) in addition to the PhD requirements listed above and satisfy the Centre’s practical requirements for the theatre as determined on admission.
  - Must maintain an A- average in their first 4.0 FCE in order to continue in the program.
  - With approval, students 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.
- Although the program has been designed for completion in four years, some students may require a longer period to complete all of the requirements.

Courses

Registrants are advised to confirm course offerings by consulting the Centre’s Web site, normally updated with timetable by mid-summer, at which time additional courses may be listed.

Core Program

DRA 1002H History of the Theatre II: Modernity and Modernism in North American Theatre
DRA 1003Y Introduction to Theatre, Drama and Performance Studies
DRA 1011H Traditions of Performance Theory
DRA 1012H 20th-Century Theatre and Performance
DRA 1051H Postcolonial Drama
DRA 1055H Performance Research: Sexual Performance (Studies in S/M)
DRA 1099H Dramaturgy of Sound in Drama, Film, Performance Art and Music
DRA 2011H Theatrical Performance and Reception
DRA 3019H Shakespeare in Modern Production
DRA 3021H Elizabethan Performance: History and Practice
DRA 3211H The Performing Body
DRA 4057H Women Script History
DRA 4090Y Directed Reading/Theatre Research
DRA 4091H Directed Reading/Theatre Research
DRA 5000Y Theatre Practice I
DRA 5001Y Theatre Practice II (Credit/No Credit)
DRA 6000Y Research Seminar (Credit/No Credit)

Cross-Listed Courses

The Graduate Centre for Study of Drama also cross-lists courses in drama, theatre, and performance offered by other graduate units of the University. These typically are:
- Classics
- Comparative Literature
- Curriculum, Teaching and Learning
- English
- French
- German
- Italian
- Slavic
- Spanish

A listing of courses, available during the academic year, appear on the Centre’s Web site which is updated in mid-summer. Students requesting courses from the above cross-listed 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.
Graduate Faculty

**Full Members**
Alan Ackerman - BA, MA, PhD
Veronika Ambros - BA, MA, PhD
Kay Armatage - BA, MA, PhD
John Astington - BA, MA, PhD
Salvatore Bancheri, BA, MA, PhD
Bruce Barton - PhD
Elspeth Brown, MA, PhD
Antje Budde
George Elliott Clarke - BA, MA, PhD
Michael Cobb, BA, MA, AM, PhD
Nancy Copeland - BA, MA, PhD
Brian Corman - AB, AM, PhD
Derrick De Kerckhove - BA, MA, PhD, Dip 3eme Cycle, FRSC
Konrad Eisenbichler - BA, MA, PhD
Kathleen Marie Gallagher - BA, BEd, MEd, PhD
Colin Hill, PhD
Linda Hutcheon - BA, MA, PhD, University Professor, FRSC
Stephen Johnson - BA, MA, PhD *(Director)*
Daniel Justice, BA, MA, PhD
Charles Keil - BA, MA, PhD
David Klausner - AB, PhD
Pia Kleber - BA, MA, PhD
Anne Lancashire - BA, AM, PhD
D Ian Lancashire - BA, MA, PhD
Jill Levenson - BA, MA, PhD, FRSC
Michael Lettieri, BA, MA, PhD
Andrea Most, BA, MA, PhD
Mary Ann Parker - BA, MM, PhD, ARCT
Domenico Pietropaolo - BSc, MA, PhD
Ato Quayson - PhD, BA
Martin Revermann - PhD
Stephen Rupp - BA, MA, MPhil, PhD
Paula Sperdakos - BA, MA, PhD *(Coordinator of Graduate Studies)*
Neil Ten Kortenaar, PhD
H. Leslie Thomson - BA, MA, PhD
Tamara Trojanowska - BA, MA, PhD

**Members Emeriti**
Richard Plant - BA, MA, PhD
Michael Sidnell - BA, MA, PhD

**Associate Members**
Alan Filewod
Sarah Jane Freeman
Colin Hill, PhD
Andrew Houston
Leslie Katz - BA, PhD
Robert King
Richard Knowles - MA, PhD
Jeremy Lopez - PhD, MA, BA
Sarah MacLean - BA, MA, PhD
Selma Odom - PhD
Degree Programs

East Asian Studies  EAS

Faculty Affiliation
Arts and Science

Degree Programs Offered
East Asian Studies – MA, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Asia-Pacific Studies, see p. 413
   • East Asian Studies, MA

Overview
The Department of East Asian Studies offers programs in two fields: Classical East Asian and Modern East Asian.

Contact and Address
Web: www.chass.utoronto.ca/eas
E-mail: celia.sevilla@utoronto.ca
Telephone: (416) 416-978-7260
Fax: (416) 978-5711

Department of East Asian Studies
Robarts Library
14-087, 130 St. George Street
University of Toronto
Toronto, Ontario M5S 3H1
Canada

Degree Programs

Master of Arts

Minimum Admission Requirements
• Accepted under the general regulations of the School of Graduate Studies and the regulations of the department.
• Successful completion of a four-year University of Toronto BA degree, or its equivalent from a recognized university, in a Specialist or Major East Asian Studies program, with at least B+ standing in the final year.
• 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 sample of the applicant’s writing in English.
• Non-native speakers of English are required to take the TOEFL (Test of English as a Foreign Language).

Applications taking the paper-based TOEFL exam must achieve a minimum score of 600 and 5 on the TWE. Applicants taking the computer-based TOEFL exam must achieve a minimum score of 250 and 5 on the essay rating component. Applicants taking the internet-based TOEFL exam 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.
• Application deadline is December 1 for admission in the following September.

Program Requirements
• One year of full-time graduate study.
• Program may be completed either through non-language course work or through a combination of non-language courses and a thesis; normally 4.0 full-course equivalents (FCE) are required for students not writing a thesis, and 2.0 FCE for students writing a thesis.
• Courses selected in consultation with the Coordinator of Graduate Studies.

Doctor of Philosophy

Minimum Admission Requirements
• Accepted under the general regulations of the School of Graduate Studies and the regulations of the department.
• Normally the 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-. Departmental assessment may also permit registration directly from a B.A. 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 sample of the applicant’s writing in English.
• Non-native speakers of English are required to take the TOEFL (Test of English as a Foreign Language).

Applications taking the paper-based TOEFL exam must achieve a minimum score of 600 and 5 on the TWE. Applicants taking the computer-based TOEFL exam must achieve a minimum score of 250 and 5 on the essay rating component. Applicants taking the internet-based TOEFL exam 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.
• Application deadline is December 1 for admission in the following September.
Program Requirements

• 4.0 non-language full-course equivalents (FCE), selected in consultation with the Coordinator of Graduate Studies. 2.0 FCE must be completed in the first year of the program, with an average grade of at least A-. The remaining courses must be completed by the end of the second year of the program, maintaining an average of at least A-.

• Students are permitted to take some of their courses in other departments.

• A comprehensive qualifying examination is normally undertaken within three months of completion of course work and must be taken by June 15 of the third year of study.

• Demonstrated appropriate level of proficiency in two languages, other than English, relevant to their areas of study before undertaking qualifying examinations, the level of proficiency as well as the two languages to be determined by the department.

• After completing the comprehensive examination, students are required to produce a doctoral dissertation with the guidance of a supervisory committee. This process begins with the production of a dissertation prospectus to be approved by the committee. The completed dissertation must be defended at an oral examination.

Courses
The following courses may be offered by the department. Not all courses are offered every year. Please consult the department's Web site for a current course listing.

Cultural Studies
EAS 1118H Translation and Modernity
EAS 1207H Welfare Society and Democratization in Korea
EAS 1424H Multitude, Labour Power, Population
EAS 1506H Aspects of Classical and Medieval Indian Culture through Sanskrit Texts
EAS 1507H Ethnography of Multiculturalism: liberalism, civil society, identity politics
EAS 1603H Anthropology of South Korea
EAS 1703H Ethnography of Neoliberalism with a Focus on East Asia
COL 3380H Globalization and Culture
COL 5040H Marx, Deleuze and Empire

History
EAS 1140Y From Republic to People’s Republic: The Chinese Revolution from 1895 to the Present
EAS 1338H Architecture in Pre-Modern China
EAS 1411H Art and Archaeology of Early China
EAS 1412H Special Topics in Archaeology of Ancient China
EAS 1143Y Civilization in Medieval China
EAS 1173H, Y Modern Korean History Seminar
EAS 1174H, Y Rethinking Empire in East Asia
EAS 1314H Capitalism and Colonialism
EAS 1425H Critique of Everyday Life and Capitalism
EAS 1427H On Contingency and Capitalism
EAS 1428Y Foucault & Marx
EAS 1675Y Topics in Chinese Social and Intellectual History 1500-1950
EAS 2008H Japan's Imperial System
EAS 2020H Beyond Orientalism

Language
EAS 1040Y Elementary Vietnamese
EAS 1101Y Introduction to Classical Chinese
EAS 1115Y Reading Japanese for Graduate Purposes (Credit/No Credit)
EAS 1301Y Modern Standard Japanese I (Credit/No Credit)
EAS 1302Y Modern Standard Japanese II (Credit/No Credit)
EAS 1303Y Modern Standard Japanese III (Credit/No Credit)
EAS 1304Y Modern Standard Japanese IVa (Credit/No Credit)
EAS 1305H Modern Standard Japanese IVb (Credit/No Credit)
EAS 1312Y Introduction to Manchu
EAS 1321H Japanese I for Students with Prior Background (Credit/No Credit)
EAS 1379H The History, Structure and Politics of the Hindi Language
EAS 1500Y The Structure of the Classical Sanskrit Language (formerly EAS 2004Y Introduction to Sanskrit)
EAS 1501H, Y Intermediate Sanskrit Texts (formerly EAS 1105Y)
EAS 1621Y Modern Standard Korean I (Credit/No Credit)
EAS 1622Y Modern Standard Korean II (Credit/No Credit)
EAS 1623Y Modern Standard Korean III (Credit/No Credit)
EAS 1624Y Modern Standard Korean IV (Credit/No Credit)
EAS 1801Y Modern Standard Chinese I (Credit/No Credit)
EAS 1802Y Modern Standard Chinese II (Credit/No Credit)
EAS 1803Y Modern Standard Chinese III (Credit/No Credit)
EAS 1804Y Modern Standard Chinese IV (Credit/No Credit)
EAS 2001Y Introduction to Classical Japanese
EAS 2002Y Intermediate Classical Chinese
EAS 2003Y Advanced Sanskrit Texts I (formerly EAS 1106Y)
EAS 2006Y Advanced Sanskrit Texts II (formerly EAS 2005Y)
EAS 2007H Advanced Sanskrit Texts I

East Asian Studies 157
Degree Programs

**Linguistics and Pedagogy**
EAS 1349Y Pedagogical Grammar of Japanese
EAS 1352H Introduction to Japanese Linguistics: Syntax and Semantics
EAS 1353H Theory and Practice of Japanese Language Instruction
EAS 1452H Japanese Linguistics I

**Literature**
EAS 1137H,Y Chinese Poetics
EAS 1151H Chinese Poetry I
EAS 1152H Chinese Poetry II
EAS 1322Y The Kambun Tradition
EAS 1344Y Classical Japanese Poetry
EAS 1345H Readings in Japanese Literary Criticism
EAS 1408H Identity and Diaspora in Modern Taiwanese Literature
EAS 1444H The City, Body, and Text in Modern Japanese Literature
EAS 1502H Sanskrit Narrative Literature
EAS 1503H Sanskrit Epic Literature
EAS 1505H Buddhist Narrative Literature in Buddhist Hybrid Sanskrit
JLA 1456H Japan As Seen By ?: Reference, Apparatus, Operation

**Philosophy and Religion**
EAS 1228H Topics in Chinese Ethical Theories
EAS 1226H Topics in Modern Chinese Philosophy
EAS 1227H Topics in Chinese Religions
EAS 1469H Chinese Mahayana Buddhism
EAS 1601Y Seminar in East Asian Buddhism
EAS 1602Y Topics in Korean Thought
PHL 2015H Confucianism
PHL 2016H Taoism: Philosophy and Religion
PHL 2017H Buddhism in China
RLG 3423H Religion in the Japanese Tradition
RLG 3713Y Hinduism and Politics

**Politics**
POL 2416Y Politics and Society in Contemporary China

**Research Seminars**
EAS 1100H,Y Special Topics in Chinese Studies
EAS 1116H,Y Special Topics in Chinese Culture
EAS 1150H,Y Reading and Major Research Paper
EAS 1160H,Y Basic Topics in Chinese Culture
EAS 1163H,Y Special Topics in Korean Studies
EAS 1300H,Y Special Topics in Japanese Studies
EAS 1313Y Japanese Source Materials and Reference Works
EAS 1320Y Special Topics in Japanese Culture
EAS 1323Y Readings in Japanese Documentary Source Materials
EAS 1999Y East Asian Studies Bibliography, Reference, and Research Methodology

**Visual and Performing Arts**
EAS 1229H Topics in Chinese Aesthetics
EAS 1328H,Y Chinese Sculpture
EAS 1339H Topics in Chinese Art Theories
EAS 2003H Chinese Drama: Its History and Art

**Graduate Faculty**

**Full Members**
Eric Cazdyn - BA, MA, PhD
Carol Chin - BA, MA, PhD
Gary Crawford - BSc, MA, PhD
Richard Wl Guisso - BA, DPhil
Ping-Chun Hsiung - BA, MA, PhD
Mayumi (Yuki) Johnson - BA,MA,PHD
Ken Kawashima - BA,MA,PHD
Tong Lam - BSc, MA, PhD
Johanna Ch’ien-mei Liu - BA, MA, PhD
Hy Van Luong - BA, MA, PhD
Yue Meng
Andrew Plaks
Jennifer Purtle
Klaas Ruitenbeek
Atsuko Sakaki - MA, PhD
Stella Sandahl - MA, DES, PhD
Graham Sanders - BA, PhD (Coordinator of Graduate Studies)
Andre Schmid - BA, MA, PhD
Chen Shen - BA, MA, PhD
Vincent Tsing-song Shen - BA, MA, PhD, Lee Chair (Chair)
Je Sook Song - BA, PHD
Nhung Tran - BA, MA, PhD

**Members Emeriti**
Sonja Arntzen - BA, MA, PhD
Milena Dolezelova - MA, PhD
Michael Donnelly - BS, Institute Certificate, MA, PhD
Victor Falkenheim - BA, MA, PhD
Frank Hoff
Anthony Liman
Richard Lynn - BA, MA, PhD
Kazuko Nakajima - BA, MA, MPh
Wayne Schlepp
Reiko Tsukimura
Shuzo Uyenaka - BA, MA, PhD
David Waterhouse - BA, MA, LRAM, FRSC

**Associate Members**
Juhn Ahn - BA, MA, PhD
Ito Peng - BA, BSW, MA, PhD
Janet Poole
Joseph Wong - BA, MA, PhD, Canada Research Chair
Ecology and Evolutionary Biology  EEB

Faculty Affiliation
Arts and Science

Degree Programs Offered
Ecology and Evolutionary Biology – MSc, PhD

Collaborative Programs Offered
The Department is renegotiating arrangements with the following degree programs. Please consult the Department of Ecology and Evolutionary Biology for current information.
1. Environmental Studies, see p. 443
   • Ecology and Evolutionary Biology, MSc, PhD
2. Genome Biology and Bioinformatics, see p. 448
   • Ecology and Evolutionary Biology, PhD
3. Toxicology, Biomedical, see p. 421
   • Ecology and Evolutionary Biology, MSc, PhD

Overview
Ecology and Evolutionary Biology students may study in three major fields – Ecology, Evolution, and Integrative Biology. Within these fields, professors' research interests include anatomy/physiology, behaviour, behaviour genetics, bioinformatics, community/population/ecosystem/landscape/evolutionary ecology, conservation biology, developmental biology, genetics/genomics, microbiology, molecular evolution, plant biology, taxonomy/systematics and theoretical biology. Professors who supervise graduate students are located on all three campuses of the University (St. George, Mississauga, Scarborough) as well as at the Royal Ontario Museum.

Contact and Address
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E-mail: grad@eeb.utoronto.ca
Telephone: (416) 978-7172
Fax: (416) 978-5878
Department of Ecology and Evolutionary Biology
Earth Sciences Centre
Room 3055L, 25 Willcocks Street
University of Toronto
Toronto, Ontario M5S 3B2
Canada

Degree Programs

Master of Science

Minimum Admission Requirements
• Applicants are accepted under the general regulations of the School of Graduate Studies.
• Four-year University of Toronto bachelor's degree, or its equivalent 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.
• Students will not be admitted until they have made arrangements to secure a research supervisor by contacting professors in the Department.

Program Requirements
• The MSc program is normally completed in 16 months.
• Students must complete a 0.5 graduate full-course equivalent (FCE) chosen from courses offered; the Faculty Research Course is recommended.
• A thesis is completed under the direction of the student's supervisor, assisted by an advisory committee, and defended at a departmental oral examination.

Doctor of Philosophy

Minimum Admission Requirements
• Students will not be admitted until they have made arrangements to secure a research supervisor by contacting professors in the Department.
• PhD students are generally accepted by one of three routes:
  o following completion of an appropriate University of Toronto MSc degree, or its equivalent from a recognized university, with a minimum A- average in all work completed in the master's program and a minimum B+ average in the last year of the bachelor's program
  o by transferring from the MSc program, conditional upon evidence of research excellence as judged by the thesis supervisory committee
  o by direct entry, that is, completing a BSc with a minimum B+ average in the final year of the bachelor's degree and B in the previous year, A- or better in courses in ecology and evolutionary biology, and proven research accomplishments

Program Requirements
• The PhD program is normally completed in four years. Exceptional students admitted to the PhD program without an MSc degree will be admitted into a five-year program and will be required to complete course work equivalent to the master's program in addition to the PhD course requirements.
Degree Programs

- Students must complete 1.5 graduate FCE chosen from courses offered (2.0 graduate FCE for students entering without an MSc degree). Students transferring into the PhD program from the MSc may apply 0.5 graduate FCE towards the PhD course requirement.
- All students are examined 18 months into the program on both their mastery of concepts in ecology and evolutionary biology and a submitted research proposal.
- Students must deliver two public seminars in the Department based on their thesis research.
- Students must submit a thesis and defend it at a Final Oral Examination conducted by the School of Graduate Studies.

Courses

Not all courses are offered every year. Please refer to the Ecology and Evolutionary Biology Web site for a current list of course offerings.

Courses Offered at the Graduate Level Only

EEB 1002H Advanced Research and Reading Course
   (This course may be taken only once for credit, and is only available to students who were admitted to the old Zoology, Plant and Microbial Biology, or Botany programs)

EEB 1100H Faculty Research Course
EEB 1210H Advanced Statistics
EEB 1230H Multivariate Statistics
EEB 1250H Spatial Statistics
EEB 1310H Philosophy and Methods
EEB 1320H Ecology
EEB 1350H Evolution
EEB 1360H Behaviour
EEB 1420H Special Topics in Ecology
EEB 1440H Special Topics in Evolution
EEB 1470H Special Topics in Integrative Biology

Graduate Courses with Significant Undergraduate Content

These courses will normally constitute only a minor component of the required credits

EEB 1004Y Vertebrate Paleontology
EEB 1328H Physiological Ecology
EEB 1330H Systematic Botany
EEB 1337H Families of Vascular Plants
EEB 1340H Comparative Plant Morphology
EEB 1341H Plant Anatomy
EEB 1459H Introduction to Theoretical Population Genetics
EEB 1460H Molecular Evolution
EEB 1462H Phylogenetic Systematics
EEB 1468H Limnology

Graduate Faculty

Full Members

Peter Abrams - BS, PhD
Aneil Agrawal - BSc, PhD, Canada Research Chair
James Anderson - BA, PhD
Maydianne Andrade - BSc, MSc, PhD
George Arhonditsis - BSc, MSc, PhD
Allan Baker - BSc, MSc, PhD
Robert Baker - BSc, MSc, PhD
Spencer Barrett - BSc, PhD, Canada Research Chair
Rudy Boonstra - BSc, PhD
Daniel Brooks - BS, MS, PhD
Leslie Buck - BSc, PhD
Malcolm Campbell - BSc, MSc, PhD
Terence Carleton - BSc, MSc, PhD
John Caspersen - BA, PhD
Belinda Chang - BA, PhD, Canada Research Chair
Nicholas Collins - BA, PhD
Douglas Currie - BSc, PhD
Asher Cutter - PhD, Canada Research Chair
Helene Cyr - BSc, MSc, PhD
D Christopher Darling - BSc, MSc, PhD
Timothy Dickinson - BSc, MSc, PhD
James Eckenwalder - BA, PhD
Mark Engstrom - BS, MS, PhD
Mike Josee Fortin - BSc, MSc, PhD
James Fullard - BSc, MSc, PhD
Robert Fullthorpe - BSc, MSc, PhD
David Gibo - BA, MA, PhD
Marti Gross - BSc, PhD
David Gutman - BS, PhD, Canada Research Chair
Darryl Gwynne - BSc, PhD
David Irwin - BSc, PhD
Donald Jackson - BSc, MSc, PhD
Linda Kohn - BS, PhD
Petar Koton - PhD
Herbert Kronzucker - BSc, PhD, Canada Research Chair
Joel Levine - BA, PhD, Canada Research Chair
Nathan Richard Lovejoy - BSc, MSc, PhD
Lisa Manne - BSc, MSc, PhD
Andrew Mason - BSc, MSc, PhD
John McAndrews - BSc, MSc, PhD
Deborah McLennan - BSc, MSc, PhD
Jean-Marc Moncalvo - BSc, MSc, PhD
Robert Murphy - BA, MA, PhD
Robert Reisz - BSc, MSc, PhD
James Rising - BA, PhD
F. Helen Rodd - BSc, MSc, PhD
Locke Rowe - BSc, MSc, PhD, Canada Research Chair
Rowan Sage - BA, MS, PhD
Tammy Sage - BA, MS, PhD
Steven Short - PhD
Sandy Smith - BSc, MSc, PhD
Marla Sokolowski - BSc, PhD, FRSC, Canada Research Chair
W. Gary Sprules - BSc, MA, PhD (Associate Chair, Graduate Studies)
Sasa Stefanovic - PhD
John Stinchcombe - BA, PhD
Sean Thomas - BA, PhD, Canada Research Chair

160 Ecology and Evolutionary Biology
James Thomson - AB, MS, PhD (Acting Chair)
Helene Wagner - PhD
Arthur Weis - BA, PhD
D Dudley Williams - BSc, DipEd, MSc, PhD, DSc
Richard Winterbottom - PhD
Ann Zimmerman - BA, PhD

Members Emeriti
Nancy Dengler - BA, MS, PhD
Harold Harvey - BSc, MSc, PhD
Robert Jefferies - BSc, PhD
Nicholas Mrosovsky - BA, PhD

Associate Members
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Jason Head - PhD
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Timothy Johnson - BSc, MSc, PhD
Nigel Paul Lester - BA, MSc, PhD
Nicholas Mandrak - PhD
Charles Minns - BSc, PhD
Alan Moses - BSc, MSc, PhD
Mark Ridgway - BSc, MSc, PhD
Brian Shuter - BSc, MSc, PhD
Keith Somers - BSc, MSc, PhD
Denis Walsh - BSc, PhD, BA, MPhil, PhD, Canada

Research Chair
Carin Wittnich - MSc, DVM
Economics  ECO

Faculty Affiliation
Arts and Science

Degree Programs Offered
Economics – MA, Combined JD/MA, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Asia-Pacific Studies, see p. 413
   • Economics, MA
2. Environmental Studies, see p. 443
   • Economics, MA
3. International Relations, see p. 458
   • Economics, MA
4. Management and Economics, see p. 464
   • Economics, PhD

Overview
The Department of Economics offers degree programs leading to the Master of Arts, Combined Juris Doctor/Master of Arts, and Doctor of Philosophy. Graduate program details appear on the department’s Web site. For information on the program in Financial Economics consult the separate entry in this calendar.

Contact and Address
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Department of Economics
Room 4072, Sidney Smith Hall
University of Toronto
Toronto, Ontario M5S 3G3
Canada

Degree Programs
Master of Arts

Minimum Admission Requirements
• Four-year or honours degree (or equivalent) with at least a mid-B (75%) standing in the final year of the program.
• Successful completion of full-year courses in calculus, and in intermediate microeconomics, macroeconomics, and statistics.
• Meeting these minimum requirements does not imply automatic acceptance into the program.

Program Requirements
• Successful completion of the math stat review.
• For the MA regular stream, 4.0 full-course equivalents (FCE) including the core courses micro, macro, and econometrics.
• For the MA doctoral stream (for students pursuing a PhD), 4.0 FCE including the core courses micro, macro and econometrics, and completion of at least one of the following PhD sequences; microeconomics (ECO 2020H and ECO 2030H), macroeconomics (ECO 2021H and ECO2031H), or econometrics (ECO 2400H and ECO 2401H) and the associated tutorials.
• Program is normally completed in two sessions.

Doctor of Philosophy

Minimum Admission Requirements
• Minimum B+ standing in a MA program in economics. Since admission is competitive, accepted applicants will normally have achieved a standing considerably higher than the minimum B+.

Program Requirements
• The PhD is a full-time program. Applicants must be registered as full-time students for a minimum period of three years.
• Students must maintain a minimum average of B+ throughout their course work.
• Year 1 - normally two half-courses in microeconomics (ECO 2020H and ECO 2030H), macroeconomics (ECO 2021H and ECO 2031H), and econometrics (ECO 2400H and ECO 2401H).
• Year 2 - students choose two field areas, taking the equivalent of three half-year courses in each.
• Second-year and third-year students must also participate in the full-year graduate research seminar (ECO 4060Y^).
• Suitable graduate level courses taken by a student in the MA program in the Department of Economics may fulfill some of the course requirements of the PhD program.
• Demonstration of competence in the core of the discipline and in two of its special fields.
• A thesis based on original research.
• Successful completion of comprehensive examinations in micro, macro, and the major field by the end of the second year of study.
• An original paper must be written in the second year and presented in the relevant workshop in the fall of the third year.
• By the spring of the third year, students must submit a proposal to a formal dissertation committee.

^Courses which may continue over a program. The course is graded when completed.
Combined Juris Doctor/Master of Arts
The JD/MA in Economics permits the completion of both degrees in three years rather than the four years it would take to acquire them independently.

Minimum Admission Requirements
• Applicants must gain independent admission to the JD program and the MA program in Economics before they may be considered for admission to the Combined JD/MA program.

Program Requirements
• Successful completion of the math stat review.
• 6 half-courses in economics including the core courses, and 45 credits in law to satisfy the requirements as established for each degree program.

Combined Juris Doctor/Doctor of Philosophy
The Combined JD/PhD program is designed to attract highly qualified students who can benefit from the interaction between law and economics. This program allows students to complete the requirements of the JD degree and to reach all but the dissertation stage of the PhD at the end of four years.

Minimum Admission Requirements
• Applicants must gain independent admission to the JD program and the PhD program in Economics before they may be considered for admission to the Combined JD/PhD program.

Program Requirements
• Year 1 - students are admitted to the Faculty of Law and receive a deferred acceptance to the PhD program.
• Years 2 and 3 - students are registered in the Department of Economics and complete the requirements of the first two years of the PhD program.
• Year 4 - students complete their JD requirements and thereafter are registered full-time in the PhD program in the Department of Economics.

Courses
Not all courses are offered every year. Please refer to the department's Web site for a current list.

Preliminary Courses
ECO 1010H Mathematics and Statistics Review for MA Students (Credit/No Credit)
ECO 1011H Mathematics for PhD Students (Credit/No Credit)

Core Courses in Economic Theory
ECO 2020H Microeconomic Theory I
ECO 2021H Macroeconomic Theory I
ECO 2030H Microeconomic Theory II
ECO 2031H Macroeconomic Theory II
ECO 2050H Applied Microeconomics
ECO 2051H Applied Macroeconomics
ECO 2060H Economic Theory—Micro (for MA students only)
ECO 2061H Economic Theory—Macro (for MA students only)

Advanced Microeconomic Theory and Mathematical Economics
ECO 2070H Workshop in Economic Theory (jointly with Institute for Policy Analysis) (Credit/No Credit)
ECO 2100H Mathematical Economics I
ECO 2101H Mathematical Economics II
ECO 2102H Topics in Microeconomic Theory

History of Economic Thought
ECO 2004H The History of Economic Thought
ECO 2005H Workshop in the History of Economic Thought (Credit/No Credit)
ECO 2006H Topics in the History of Economic Thought

Economic History
ECO 2234H Topics in North American Economic History
ECO 2250H Workshop in Economic History (Credit/No Credit)

International Economics
ECO 2300H International Trade Theory
ECO 2301H International Monetary Theory
ECO 2302H International Economics: Theory and Institutions
ECO 2303H International Macroeconomics
ECO 2304H Workshop in International Economics (jointly with Institute for Policy Analysis) (Credit/No Credit)
ECO 2305H Topics in International Finance
ECO 2310H Topics in International Trade

Econometrics
ECO 2400H Econometrics I
ECO 2401H Econometrics II
ECO 2402H Advanced Econometrics
ECO 2403H Topics in Econometrics
ECO 2404H Empirical Applications of Economic Theory
ECO 2406H Workshop in Econometrics (Credit/No Credit)
ECO 2408H Econometrics (for MA students only)
ECO 2410H Applied Econometrics
ECO 2411H Financial Econometrics

Macroeconomics and Monetary Economics
ECO 2103H Topics in Macroeconomic Theory
ECO 2500H Monetary Theory I
ECO 2501H Monetary Theory II
ECO 2502H Advanced Monetary Theory
ECO 2503H Financial Economics I
ECO 2504H Financial Economics II
ECO 2505H Macroeconometric Models and Forecasting
Degree Programs

ECO 2506H Economics of Financial Risk Management
ECO 2507H International Financial Markets
ECO 2550H Workshop in Monetary and Macroeconomics (jointly with Institute for Policy Analysis) (Credit/No Credit)

Public Economics
ECO 2600H Public Economics I
ECO 2601H Public Economics II
ECO 2606H Topics in Public Economics
ECO 2607H Workshop in Public Economics (jointly with Institute for Policy Analysis) (Credit/No Credit)
ECO 2610H Health Economics
ECO 2611H Empirical Welfare Analysis

Economic Development
ECO 2700H Economic Development
ECO 2701H Development Economics I
ECO 2703H Development Economics II
ECO 2704H Topics in Growth and Development
ECO 2738H Economic Development of China
ECO 2770H Workshop in Economic Development (Credit/No Credit)
JPE 2408Y The Political Economy of Development

Labour Economics
ECO 2800H Labour Economics I
ECO 2801H Labour Economics II
ECO 2802H Economics Inside Organizations
ECO 2806H Workshop in Labour Economics (jointly with Institute for Policy Analysis and Centre for Industrial Relations) (Credit/No Credit)
ECO 2807H Economics and Demographics

Industrial Organization
ECO 2900H Industrial Organization and Public Policy I
ECO 2901H Industrial Organization and Public Policy II
ECO 2909H Workshop in Industrial Organization (jointly with Institute for Policy Analysis) (Credit/No Credit)

Law and Economics
ECO 3501H Economic Analysis of Law
ECO 3504H International Trade Regulation (also LAW 285)

Other Courses
ECO 2908H Environmental and Resource Economics
ECO 3500H Economics of Organizations and Contracts
ECO 4050H Reading Course in an approved special field

ECO 4051H Reading Course in an approved special field
ECO 4060Y Graduate Research Seminar (Credit/No Credit)

Graduate Faculty

Full Members
Victor Aguirregabiria - BA, MSc, PhD
Varouj Aivazian - BS, MA, PhD
Michelle Alexopoulos - BSc, MA, PhD
Gordon Anderson - BA, MSc, PhD
Michael Baker - BCom, MA, PhD, Royal Bank Chair in Public and Economic Policy
Dwayne Benjamin - BSc, MA, PhD
Loren Brandt - BS, MS, PhD
Jack Carr - BCom, MA, PhD
Francois Casas - BA, MSc, PhD
Ettore Vincenzo Damiano - MA, MPH, PhD
Michael Denny - BSc, Ph.D
Donald Dewees - BSc, LLB, BScEE, PhD
Gilles Duranton - BSc, MA, MSc, PhD, Noranda Chair in International Trade and Development
Andres Erosa - BA, MA, PhD
Miquel Faig - BA, MEC, PhD
David Foot - BA, AM, PhD
Maria Luisa Fuster - BA, MA, PhD
Christian Gourieroux - PhD, Prof, Paris IX/ENSAE
Morley Gunderson - BA, MA, PhD, Canadian Imperial Bank of Commerce (CIBC) Chair in Youth Employment
Gillian Hamilton - MEC, PhD
Ignatius Horstmann - BA, PhD
Arthur Hosios - BEng, MA, MEng, PhD (Chair)
Susan Howson - BA, MA, MSc, PhD
Gregory Jump - BA, PhD
Hao Li - BS, PhD
John Maheu - BA, MA, PhD
Gilbert Mathewson - BCom, PhD
Robert McMillan - BA, PhD
Angelo Melino - BA, PhD
Donald Moggridge - BA, MA, PhD
Phillip Oreopoulos - BA, MA, PhD
Martin Osborne - BA, PhD
James Pesando - BA, MA, PhD
Carolyn Pitchik - BA, MSc, PhD
Frank Reid - BA, MSc, PhD
Diego Restuccia - BA, MA, PhD
Joanne Roberts - BA, MA, PhD
Shouyong Shi - BS, MA, PhD, Canada Research Chair
Aloysius Siow - BA, PhD
Michael Smart - BA, MA, PhD
Mark Stable - BA, MA, PhD, Director School of Public Policy and Governance
Michael Trebilcock - LLB, LLM, FRSC, University Professor
Daniel Trefler - BA, MPh, PhD
Matthew Turner - BA, MA, PhD
Johannes Van Biesbroeck - MA, PhD

*Courses which may continue over a program. The course is graded when completed.
*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.
Adonis Yatchew - BA, MA, PhD (Coordinator of Graduate Studies)
Xiaodong Zhu - BSc, MSc, PhD

Members Emeriti
R Albert Berry - BA, PhD, FRSC
Nanda Choudhry - BA, MS, PhD
Jon Cohen - BA, MA, PhD
Scott Eddie - BS, PhD
John Floyd - BComm, MA, PhD
Melvyn Fuss - BSc, MA, PhD
Gerald Helleiner - OC, PhD, FRSC
Samuel Hollander - OC, BSc, PhD, FRSC, University Professor Emeritus
J Allan Hynes - BA
John Munro - BA, MA, PhD
Abraham Rotstein - BA, PhD
Andrew Watson - BA, BCom, MA
Thomas Wilson - BA, AM, PhD, FRSC

Associate Members
Simon Board - BA, MPh, PhD
Gustavo Bobonis - BA, PhD
Martin Burda - BSc, MA, PhD
Margarida Duarte - BA, MA, PhD
Chuan Goh - BSc, MA, PhD
Gustavo Indart - BA, MA, PhD
Gueorgui Kambourosv - BA, MA, PhD
Ekaterina Malinova - BSc, MA, PhD
Paul Masson - BA, PhD
Stephane Mechoulan - BA, MA, PhD
Jordi Mondria - BA, MA, PhD
Peter Morrow - BA, MA, PhD
Andreas Park - MSc, MPh, PhD
Carlos Serrano - BS, MS, MA, PhD
Xianwen Shi - BS, MA, MPh, PhD
Colin Stewart - BS, MSc, MA, MPh, PhD
Degree Programs

Electrical and Computer Engineering  ECE

Faculty Affiliation
Applied Science and Engineering

Degree Programs Offered
Electrical and Computer Engineering – MASc, MEng, PhD
Telecommunications – MEngTel

Collaborative Programs Offered
Degree programs that participate in:
1. Biomedical Engineering, see p. 418
   • Electrical and Computer Engineering, MASc, PhD

Overview
The Edward S. Rogers Sr. Department of Electrical and Computer Engineering offers graduate courses and research opportunities in four programs of study. The Master of Applied Science and Doctor of Philosophy are research-based degree programs and require the completion of a thesis. The Master of Engineering and Master of Engineering in Telecommunications are course-based degree programs. Both the MEng and MEngTel programs may be taken on a full-time or part-time basis.

The Master of Applied Science program provides students with an opportunity to pursue advanced studies in the particular field of major interest and an opportunity to engage in research. The program requires full-time study for a minimum of one year, course work, and a thesis on a research project.

The Master of Engineering 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 degree requirements, consisting of courses and an optional MEng project, are structured to be completed in one year by a full-time student.

The Master of Engineering in Telecommunications program is not accepting applications for the academic year 2008/2009.

The Doctor of Philosophy program is designed for those exceptional individuals who intend to pursue a career in fundamental or applied research. The program requires course work and the successful completion of a research thesis.

The Department offers research in the following areas:
1. Biomedical Engineering
2. Communications
3. Computer Engineering
4. Electromagnetics
5. Electronics
6. Energy Systems
7. Photonics
8. Systems Control

Details available on the Department’s Web site at www.ece.utoronto.ca/research.htm

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The Edward S. Rogers Sr. Department of Electrical and Computer Engineering
University of Toronto
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10 King’s College Road
Toronto, Ontario  MSS 3G4
Canada

Degree Programs

Electrical and Computer Engineering

Master of Applied Science

Minimum Admission Requirements
• Four-year University of Toronto 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.

Program Requirements
• Normally 2.5 graduate full-course equivalents (FCE) or 5.0 half-courses. Students whose undergraduate preparation does not include the study of subjects deemed to be necessary for research in the chosen field 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.
• During the first year of registration, students are required to attend the ECE Colloquium and complete JDE 1000H Ethics in Research.

Master of Engineering

Minimum Admission Requirements
• Four-year University of Toronto 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.
Program Requirements
- Normally comprise 4.5 graduate full-course equivalents (FCE) or 9.0 half-courses for applicants with adequate undergraduate preparation. At least 2.5 graduate FCE or 5.0 half-courses must be drawn from graduate courses offered by the Department of Electrical and Computer Engineering.
- All students must enrol in a field of study.
- Students may choose to complete an engineering project with an equivalent value of 1.5 FCE.
- Students choosing the project option will be required to complete a total of 3.0 FCE 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.
- The MEng degree program may be taken on a full-time or part-time basis.

Doctor of Philosophy

Minimum Admission Requirements
- University of Toronto master’s degree (with thesis) in Electrical and Computer Engineering or its equivalent from a recognized university.
- An average grade equivalent to a University of Toronto B+ or better in a previous master’s degree program.
- The Department must be satisfied of the student’s ability to do advanced research before admission is granted.

Program Requirements
- Each student will be required to pass courses of study to satisfy the requirements of the general regulations and the specific requirements of the Department.
- Normally 2.5 full-course equivalents (FCE) or 5.0 half-courses not previously used for other degree credit.
- Thesis.
- Some outstanding students may be permitted to transfer directly from the MASc program to the PhD program without completing the MASc degree. Such students will be required to complete 5.0 FCE.
- During the first year of PhD registration, each student must pass a qualifying oral examination in the area of research.
- The program has been designed to enable students who have already completed a master’s degree to complete all requirements within four years. More details are available in the Electrical and Computer Engineering Web site.
- During the first year of registration, students are required to attend the ECE Colloquium.
- During the first year of registration, students are required to complete JDE 1000H Ethics in Research, if they have not already done so in a previous University of Toronto master’s program.

Telecommunications

Master of Engineering in Telecommunications

The Master of Engineering in Telecommunications program is not accepting applications for the academic year 2008/2009.

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 JDE 1000H Ethics in Research during their first year of registration.

The Department should be consulted each session as to course offerings.

Energy Systems
- ECE 533H Power Electronics
- ECE 1041H Numerical Solution of Field Problems
- ECE 1042H High-Voltage Engineering
- ECE 1049H Special Topics in Power Devices and Systems
- ECE 1055H Dynamics of HVdc/ac Transmission Systems
- ECE 1057H Static Power Converters I—Principles of Operation and Applications
- ECE 1058H Static Power Converters II—Dynamics and Control
- ECE 1059H Special Topics in Power Systems
- ECE 1063H Application of Power Devices
- ECE 1065H Custom Power Controllers
- ECE 1066H Design of High-Frequency Switch-Mode Power Supplies (SMPS)
- ECE 1067H Switch-Mode Power Supplies (SMPS)
- ECE 1068H EMC in Power Engineering
- ECE 1072H AC Drive System Dynamics
- ECE 1081H Application of the Finite Element Method to Field Problems
- ECE 1082H Mathematics for Advanced Electromagnetics
- ECE 1083H Harmonic Balance and the Finite Element Method
- ECE 1089H Special Topics in Electromagnetics

Electromagnetics
- ECE 524H Microwave Circuits
- ECE 1228H Electromagnetic Theory
- ECE 1229H Advanced Antenna Theory
- ECE 1236H Microwave and Millimetre-wave Techniques
- ECE 1243H Topics in Electromagnetic Waves
- ECE 1247H Nonlinear Optics
- ECE 1251H Matter Wave Interaction
Degree Programs

Electronics
ECE 1252H Introduction to Computational Electrodynamics
ECE 1253H Active Microwave Circuits
ECE 512H Analog Filters
ECE 530H Analog Electronics
ECE 534H Integrated Circuit Engineering
ECE 1333H Selected Topics in Semiconductor Physics and VLSI Technology
ECE 1336H Semiconductor Physics
ECE 1352H Analog Circuit Design I
ECE 1360H Selected Topics in Instrumentation
ECE 1362H Filter Theory and Design
ECE 1364H Selected Topics in Solid State Circuit Design
ECE 1365H High Frequency Integrated Circuits
JEB 1365H Ultrasound: Theory and Applications in Biology and Medicine
ECE 1371H Advanced Topics in Analog Circuits
ECE 1373H VLSI Systems Design
ECE 1379H Introduction to Compound Semiconductor Devices
ECE 1384H Digital Circuit Design
ECE 1385H Selected Topics in VLSI Systems
ECE 1387H CAD for Digital Circuit Synthesis and Layout
ECE 1388H VLSI Design Methodology
ECE 1390H Selected Topics in Circuits and Systems
ECE 1391H Advanced Microelectronic Devices
ECE 1392H Integrated Circuits for Digital Communications
ECE 1393H Semiconductor Devices

Biomedical Engineering
JEB 1365H Ultrasound Theory and Applications in Biology and Medicine
JEB 1375H Practical Optimization
JEB 1433H Medical Imaging
JEB 1444H Neural Engineering
JEB 1447H Sensory Communications
JEB 1451H Cellular Bioelectricity
BME 1452H Signal Processing for Bioengineering

Photronics
ECE 525H Lasers and Detectors
ECE 527H Passive Photonic Devices
ECE 1435H Applied Optics
ECE 1448H Quantum Mechanics for Engineers
ECE 1449H Photonics I (Exclusion: students who have taken ECE 527H cannot take ECE 1449H)
ECE 1450H Photonics II
ECE 1460H Special Topics in Photonics
ECE 1461H Advanced Laser Processing
ECE 1467H Integrated Optical Circuit Design
ECE 1468H Electronic and Optical Properties of Quantum Dots
ECE 1469H Amorphous Semiconductors: Fundamentals and Applications
ECE 1470H Nanocomposite Materials for Luminescence, Detection, Modulation, and Switching
ECE 1471H Erbium-doped Fiber Amplifiers: Design and Characterizations
ECE 1472H Photonic Fabrication and Packaging
ECE 1473H Micro and Nano Fabrication Technologies for Compound Semiconductors
ECE 1474H Fibre Lasers and Amplifiers

Communications
ECE 1500H Stochastic Processes
ECE 1501H Error Control Codes
ECE 1502H Information Theory
ECE 1505H Convex Optimization
ECE 1506H Communications and Signal Processing—Seminar I
ECE 1507H Communications and Signal Processing—Seminar II
ECE 1508H Special Topics in Communications
ECE 1511H Signal Processing
ECE 1512H Digital Image Processing and Applications
ECE 1514H Spectral Analysis and Array Processing
ECE 1515H Smart Antennas
ECE 1516H Visual Data Engineering
ECE 1520H Data Communications I
ECE 1521H Statistical Communication Theory
ECE 1522H Data Communications II
ECE 1523H Coded Modulation
ECE 1528H Special Topics in Data Communications
ECE 1529H Adaptive Systems for Signal Processing and Communications
ECE 1530H Multi-User Detection
ECE 1531H Quantum Information Theory
ECE 1540H Digital Telephony
ECE 1541H Communication Networks I
ECE 1542H Communication Networks II
ECE 1543H Mobile Communications Systems
ECE 1544H Optical Communication Networks
ECE 1545H Bridges and Routers
ECE 1546H Broadband Integrated Networks
ECE 1547H Content-Based and Network Security
ECE 1548H Advanced Network Architectures

Systems Control
ECE 557H Systems Control
ECE 1617H Large Scale System Theory and Control I
ECE 1635H Special Topics in Control I
ECE 1636H Control of Discrete-Event Systems I
ECE 1637H Control of Discrete-Event Systems II
ECE 1639H Analysis and Control of Stochastic Systems I
ECE 1640H Analysis and Control of Stochastic Systems II
ECE 1641H Multivariable Control Design
ECE 1643H Special Topics in Control II
ECE 1644H Large Scale System Theory and Control II
ECE 1646H Digital Control
ECE 1647H Introduction to Nonlinear Control Systems
ECE 1648H Nonlinear Control Systems
Degree Programs

Electrical and Computer Engineering

ECE 1649H Adaptive Control
ECE 1651H Adaptive Signal Processing and Control
ECE 1652H Stochastic Processes with Applications
ECE 1653H Hybrid Systems and Control Applications
ECE 1654H Optical Networks: A Systems Control Perspective

Computer Engineering

ECE 516H Personal Cybernetics and Intelligent Imaging Systems
ECE 532H Digital Hardware
ECE 540H Optimizing Compilers
ECE 1718H Special Topics in Computer Hardware Design
ECE 1746H Distributed Systems
ECE 1747H Parallel Programming
ECE 1752H Real Time Systems and Software
ECE 1754H Compilation Techniques for Parallel Processors
ECE 1755H Parallel Computer Architecture and Programming
ECE 1756H Digital Hardware Design Using Programmable Logic Devices
ECE 1759H Advances in Operating Systems
ECE 1761H Advanced Topics in Digital Hardware Design
ECE 1762H Algorithms and Data Structures
ECE 1765H File Structures and Storage Systems
ECE 1767H Design for Test and Testability
ECE 1768H Reliability of Integrated Circuits
ECE 1769H Behavioural Synthesis of Digital Integrated Circuits
ECE 1770H Trends in Middleware Systems—Selected Topics and Concepts
ECE 1771H Quality of Service
ECE 1772H Motion Analysis in Computer Vision
ECE 1773H Advanced Computer Architecture
ECE 1774H Sensory Cybernetics
ECE 1775H Microphone Arrays: Theory and Applications
ECE 1776H Computer Security, Cryptography and Privacy
ECE 1777H Computer Methods for Circuit Simulation

Master of Engineering in Telecommunications

ECE 1800Y Networking Project
ECE 1801H Telecommunications Networks
ECE 1802H Computer Networks
ECE 1803H Internetworking and WWW Infrastructure
ECE 1804H Design of Network-Based Services

Graduate Faculty

Full Members
Parham Aarabi - BASc, MASc, PhD, Canada Research Chair
Tarek Abdelrahman - BSc, MSc, PhD, PEng, Jeffrey Skoll Chair in Software Engineering (Coordinator of Graduate Studies)
Raviraj Adve - BTech, PhD, PEng
J. Stewart Aitchison - BSc, PhD, Nortel Institute Chair in Emerging Technology
Cristiana Amza - BS, MS, PhD
Ronald Baeccker - BS, MSc, PhD
Berj Bardakjian - BSc, BED, MASc, PhD, PEng
Fouad Ben Amara - BS, MS, PhD, PEng
Bensiyon Benhabib - BSc, MSc, PhD, PEng
Mireille Broucke - BSEE, MSEE, PhD
Stephen Brown - BSc, MASc, PhD
Anthony Chan Carusone - BASc, PhD, PEng
Tom Chau - BASc, MASc, PhD
Marsha Chechik - MSc, PhD
Paul Chow - BASc, MASc, PhD, Dusan and Anne Miklas Chair in Engineering Design
Francis Dawson - BASc, BSc, MASc, PhD, PEng
Eyal De Lara - BSc, MSc, PhD
Stephen Michael Easterbrook - BSc, PhD
Moshe Eizenman - BASc, MASc, PhD
George Eleftheriades - DipEE, MS, PhD, FIEEE, Canada Research Chair
Eugene Fiume - BM, MSc, PhD
Georgia Fotopoulos - BSc, MSc, PhD, PEng
Bruce Francis - BASc, MEng, PhD, FIEEE
Brendan Frey - BSc, MSc, PhD, Canada Research Chair
Roman Genov - BSc, MScE, PhD
Ashvin Frey - BASc, BSc, MSc, PhD
Andrei Goldenberg - BSc, MSc, PhD, FIEEE, PEng
Glenn Gulak - BASc, MSc, PhD, PEng, Canada Research Chair
Dimitrios Hatzinakos - DipEE, MSc, PhD, PEng, Bell Canada Chair in Multimedia
Amr Helmy - BSc, MSc, PhD
Peter Herman - BEng, MSc, PhD, FOSA, PEng
Sean Hum - BSc, MSc, PhD
Mohammad Irvani - BSc, MSc, PhD, IEEE, PEng, Lee Lau Chair in ECE
Hans-Arno Jacobsen - Dipl, PhD, Bell University Labs Chair in Software Engineering
David Andrew Johns - BASc, MASc, PhD, FIEEE
Michael Joy - BSc, MASc, PhD, PEng
Nazir Kherani - BASc, MASc, PhD, PEng
Adalbert Korrad - BEng, MEng, PhD, FIEEE, PEng
Frank Kschischang - BASc, MASc, PhD, IEEE, PEng, Canada Research Chair
Prabha Kundur - BSc, ME, MASc, PhD, IEEE, PEng, Raymond Kwong - SB, SM, PhD
Peter Lehman - BSc, EEE, MSc, PhD, PEng
Alberto Leon-Garcia - BSc, MS, PhD, IEEE, Canada Research Chair
Ofer Levi - PhD, MSc, BSc
Baochun Li - BE, MS, PhD, Bell University Labs Chair in Computer Engineering

Electrical and Computer Engineering 169
Degree Programs

Ben Liang - BSc, MSc, PhD
David Lie - BASc, MS, PhD
Jorg Liebeherr - DipInf, PhD, Nortel Networks Chair in Architecture and Services
Teng Joon Lim - BA, PhD, PEng
Hoi-Kwong Lo - BA, MS, PhD, Canada Research Chair
Wallace James MacLean - BASc, MASC, PhD, PEng
Manfredi Maggiore - MS, PhD
Andreas Mandelis - BSc, MA, MSc, PhD, FAPS
Steve Mann - BSc, BEng, MEng, PhD
Kenneth Martin - BASc, MASC, PhD, FIEEE, Stanely Ho Professor of Microelectronics
Mohammad Mojahedi - BS, MS, PhD
Andreas Moshovos - BS, MSc, PhD
Adrian Nachman - BSc, MA, PhD
Farid Najm - BE, MS, PhD, FIEEE, PEng
Wai Tung Ng - BASc, MASC, PhD, PEng
Lacra Pavel - BSc, PhD
Konstantinos Plataniotis - BEng, MSEE, PhD, PEng
Joyce Poon - BASc, MS (California Inst of Technology), PhD (California Inst of Technology)
Milos Popovic - MSc, MASC, PhD
Aleksandar Prodic - BS, MS, PhD
Li Qian - BASc, MASC, PhD, Canada Research Chair
Jonathan Rose - BASc, MASC, PhD, PEng (Chair)
Harry Ruda - BSc, ARSM, PhD
Edward Sargent - BScEng, PhD, PEng, Canada Research Chair
Konstantinos Sarris - Dipl, MSEE, PhD
Richard Schreier - BASc, MASC, PhD
Adel Sheikholeslami - BSc, MASC, PhD, PEng
Ali Sheikholeslami - BSc, MASC, PhD, PEng
Elvino Sousa - BASc, MASC, PhD, PEng, Jeffrey Skoll Chair in Computer Networks and Innovations
J. Gregory Steffan - BASc, MASC, MSc, PhD, PEng
Stergios Stergiopoulos - BSc, MSc, PhD
Michael Stumm - DipMath, PhD
Yu Sun - BS, MS, PhD, PEng
Kien (Kevin) Truong - BASc, PhD
Shahrok Valae - BScEE, MSEE, MS, PhD
Emilie Van Deventer - BSE, MSEE, PhD, PEng
Andreas Veneris - DiplCS&S, MSc, PhD
Joaquim Jose Vicente - BASc, MS, PhD, PEng
Sorin Voinigescu - MSc, PhD
Willy Wong - BSc, MSc, PhD
David Wortman - BE, MS, PhD
Wei Yu - BASc, MS, PhD, PEng, Canada Research Chair
Jianwen Zhu - BS, MS, PhD

Associate Members
Atef Morched - BSc, PhD, DSc
Khoman Phang - BASc, MASC, PhD

Members Emeriti
Keith Balmain - BASc, MS, PhD, FIEEE, PEng, NSERC/Bell Canada Industrial Research Chair in Electromagnetics
Ian Blake - BASc, MASC, PhD, PEng
Richard Bonert - DipEng, PhD, PEng
Peter Boulton - BASc, MASC, PhD, PEng
Richard Cobbold - BSc, MSc, PhD, FRSC
Edward Davison - BASc, MA, PhD, ScD, FRSC, FCAE, FIEEE, PEng, University Professor
Shashi Dewan - BSc, ME, MASC, PhD, FIEEE, PEng

Keigo Iizuka - BSc, MEng, MS, PhD
Wasyl Janischewskyj - BASc, MASC, FIEEE, PEng
Hans Kunov - MSc, PhD, PEng
Douglas Lavers - BSc, MASC, PhD, FIEEE, PEng, Eugene Polistuk Chair in Electromagnetic Design
E Stewart Lee - BEng, MEng, PhD, PEng
Subbarayan Pasupathy - BE, MTech, MPhil, PhD, FIEEE, PEng
Velimir Ristic - DiplEng, Magister, MSc, PhD
Andre Salama - BASc, MASC, PhD, FRSC, FCAE, FIEEE, PEng, Univ Professor, Ham NSERC/Nortel Industrial Research
Adam Semlyen - DiplEng, PhD, FIEE
Gordon Slemmon - BASc, MASC, PhD, DSc, FIEEE, FEE, FCAE, PEng
Kenneth Smith - BASc, MASC, PhD, FIEEE, PEng
Peter Smith - BSc, MSc, PhD, FOSA, FIEE
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Zvonko Vranesic - BASc, MASC, PhD, PEng
Walter Wonham - BEng, PhD, FIEEE, FRSC, PEng, University Professor
Stefan Zukotynski - Magister, PhD, PEng

170 Electrical and Computer Engineering
English ENG

Faculty Affiliation
Arts and Science

Degree Programs Offered
English – MA, Combined JD/MA, PhD
Creative Writing – MA

Collaborative Programs Offered
Degree programs that participate in:
1. Book History and Print Culture, see p. 424
   • English, MA, PhD
2. Editing Medieval Texts, see p. 437
   • English, PhD
3. Health Care, Technology and Place, see p. 454
   • English, PhD
4. Jewish Studies, see p. 460
   • English, PhD
5. South Asian Studies, see p. 471
   • English, MA, PhD
6. Women and Gender Studies, see p. 473
   • English, MA, PhD
7. Women's Health, see p. 478
   • English, MA, PhD

Overview
One of the strongest and most diversified graduate English programs in North America, the University of Toronto’s Graduate English Department 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 40 graduate seminars offered every year and in the interdisciplinary conjunctions with other departments and collaborative programs. The MA and PhD programs offer a broad background in British, Canadian, Aboriginal, American, and Postcolonial literatures, a sophisticated command of current theoretical approaches, and exceptional support for significant research projects.

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Department of English
Jackman Humanities Building
6th Floor, 170 St. George Street
University of Toronto
Toronto, Ontario  MS 2M9
Canada

Degree Programs
English

Master of Arts

Minimum Admission Requirements
• B+ average 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.
• 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 on:
  o paper-based test: 600 and 5 on the TWE
  o internet-based test: 100/120 with at least 22/30 on the writing and speaking sections
• Admissions are selective; possession of minimum qualifications does not guarantee admission.

Program Requirements
• Program is usually completed in twelve months by students who are graduates of a four-year program in English or English and another subject at this University, or a similar program elsewhere.
• Students may elect to take the degree by course work only or, with permission of the Director, by course work and thesis. In either case, students must attain a B standing in each graduate course.
• MA by course work – this is the preferred option for most students, and especially for those going on to the PhD. Students are required to complete ENG 6954H Bibliography and 3.5 approved, full graduate courses or the equivalent in English.
• MA by thesis - The thesis option requires ENG 6954H Bibliography, two full graduate courses in English, or the equivalent, and a thesis of approximately 30,000 words on a topic approved by the department.

Combined Juris Doctor/Master of Arts
The Combined Juris Doctor/Master of Arts in Law and English is designed for students interested in studying the intersections of law and literature. The combined program permits the completion of both degrees in three years rather than the four years it would take to acquire them independently.
Applicants must apply to each program separately; they should indicate on their applications that they wish to be considered for the Combined JD/MA program. Students are registered in the Faculty of Law for all three years of the program and in the Department of English as well for the last two years. The MA in English must be completed by course work, not by thesis.
Minimum Admission Requirements
- Students are considered for the combined program after they have secured independent admission to the JD and MA programs.

Program Requirements
- Complete all requirements for the MA in English (course work) during their two years of registration in the Department of English, i.e., ENG 6954H (Bibliography), and 3.5 approved full-course equivalents (FCE) in English, including 1.0 from a set of designated “Law and Literature Program” courses.
- Complete 44 credits at the Faculty of Law, including “Law and Literature” or a designated alternative, and satisfy all other requirements of the JD program.
- Complete a Directed Research Project or Independent Study Course on a topic related to Law and Literature that may count toward either the Law or English requirements of the program.

Doctor of Philosophy

Minimum Admission Requirements
- General Regulations of the School of Graduate Studies.
- Admission by one of two routes:
  o a four-year University of Toronto bachelor’s degree, or its equivalent from a recognized university, that includes at least eight full-course equivalents in English with an average grade of at least an A- in the applicant’s overall program or
  o a University of Toronto master’s degree in English, or its equivalent 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 English at an advanced level. Applicants who have taken the Graduate Record Examination are encouraged to have a report sent to the department.
- Recommendations from two referees.
- A writing sample of not more than 5,000 words (approximately 15-20 pages).
- A statement of purpose.
- 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 on:
  o paper-based test: 600 and 5 on the TWE
  o internet-based test: 100/120 with at least 22/30 on the writing and speaking sections
- Admission to the PhD is based on the applicant’s undergraduate and graduate record and upon the evidence of the references and statement.
- Admissions are selective; possession of minimum qualifications does not guarantee admission.

Program Requirements
- Students pursue a program of study and research approved by the department.
- Although it is possible for a student admitted on the basis of a master’s degree, or a bachelor’s degree, to complete the PhD program in English within four years, or five years, respectively, most students will require at least one additional year to complete all the requirements, including the thesis.

Courses
- The minimum course requirements for the degree are as follows.
  o Direct admission on basis of a four-year bachelor’s degree – students must take: ENG 8000H Introduction to Bibliography, ENG 9500Y Professing Literature, and six additional full-course equivalents in English, as approved by the department. 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; complete ENG 8000H Introduction to Bibliography and an additional three full-course equivalents in the first year of the program, with an average grade of at least an A-; and complete all remaining courses, except for ENG 9500Y Professional Development, by the end of the third year of the program, maintaining an average of at least an A-.
  o Admission on basis of master’s degree – students must take ENG 8000H Introduction to Bibliography, unless this or an equivalent course has already been taken; ENG 9500Y Professional Development; ENG 9900H Professing Literature, and three additional full-course equivalents in English, as approved by the department. 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; and all course work by the end of the second year of the program, maintaining an average of at least an A-.
- Every student must take at least two full-course equivalents outside the field of specialization. The student is encouraged to combine these courses in a minor field. (Graduate courses taken as part of the master’s program and in fulfillment of the English language requirement may be counted in this connection, but not ENG 6954H Bibliography nor courses in the 9000 series.)
- Course selection must meet the approval of the department.

English Language Requirement
- Demonstrated knowledge of the history and development of the English language, especially of its early period.
- Any student who has not completed ENG 240Y, or an equivalent full-year undergraduate course in Old English, with at least a B standing, is required either
to take one of the following courses in the English language: ENG 1001H Old English I, ENG 6361H History and Structure of the English Language I, ENG 6362H History and Structure of the English Language II, or ENG 6365H Diasporic Englishes. The requirement can also be satisfied by taking a special examination in Old English.

Language Requirement
- Demonstrated reading knowledge of French by May 31 of the third year of registration, in the case of a student admitted on the basis of a master’s degree; otherwise, by May 31 of the fourth year of registration.
- With the permission of the department, another language (other than English) may be substituted for French provided that this other language is required by the student’s research area.
- The supervisory committee may require the student to qualify in other program-related languages as well.

General and Special Field Examinations
- Students are required to pass two separate examinations: the General Examination and the Special Field Examination. Details about each examination appear on the Department’s Web site.
- The General Examination is designed to give students a broad historical knowledge of the development of English Literature and of the terms, genres, and ideas that define the discipline. The exam consists of two three-hour written papers covering the whole range of English Literatures divided at 1700 C.
- The Special Field Examination is designed to give students a broad survey of a genre or a comprehensive survey of the literature of a particular period that reflects the immediate literary context of the thesis topic, but is not the preliminary bibliography for the thesis. The exam consists of a three-hour written examination followed by a two-hour oral examination approximately two weeks later. Both components are based on a reading list related to the candidate’s approved thesis area.
- The student must have completed all requirements for the degree, exclusive of thesis research, by the end of the third year (fourth year for students admitted directly from a bachelor’s degree) 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. For details, consult the Department’s Web site.

Creative Writing

Master of Arts

Minimum Admission Requirements
- Recommendations from two referees.
- A statement of purpose.
- A portfolio consisting of 20-25 pages of prose (drama, fiction, or creative non-fiction), and/or poetry. Details appear on the Department’s Web site.
- Admissions are selective; possession of minimum qualifications does not guarantee admission.
- 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 on:
  - paper-based test: 600 and 5 on the TWE
  - internet-based test: 100/120 with at least 22/30 on the writing and speaking sections

Program Requirements
- Program is usually completed in 20 months by students who are graduates of a four-year major program in English.
- Overall average of B+ or better and evidence of first-class work in English.
- Completion of two full-course equivalents in English, ENG 6950Y Creative Writing, and a supervised Writing Project (the equivalent of a thesis). All students must complete Creative Writing in the first year of their program.
- Upon completion of course work, students undertake a book-length Writing Project in a genre of 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.

Courses
The following list of courses is subject to revision; further information, including course descriptions, 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 (e.g., Comparative Literature, Medieval Studies, Drama, Information Studies, 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.

ENG 1001H Old English I
ENG 1002H Old English II
Degree Programs

ENG 1027H Constructions of the Other in Medieval Literature
ENG 1093H The Medieval Vernacular Book
ENG 1551H Chaucer: Canterbury Tales
ENG 1583H Langland: Piers Plowman
ENG 2004H Metaphysical Poetry and the Passions
ENG 2235H “1594”
ENG 2430H Early Modern Women’s Writing: Voices, Texts, and Spaces
ENG 2467H Early Modern Nationalism and Milton’s England
ENG 2485H London Drama, 1180-1590
ENG 2530H Shakespeare’s Language
ENG 2585H Authorship and Anonymity in Early Modern Drama
ENG 2683H An Introduction to History in Shakespeare’s Theatre
ENG 3217H Gulliver’s Texts and Contexts
ENG 3250H Language and Culture in 18th-Century England and North America
ENG 3403H Literature of the Seven Years War
ENG 4214H Romanticism and India
ENG 4220H Austen and Scott
ENG 4605H George Eliot, Emotion, and the New Psychology
ENG 4755H Darwin and Darwinism
ENG 4880H Re-placing England: Mapping the Real in Victorian Fiction
ENG 4947H Studies in Victorian Poetry
ENG 4973H Marx and the American Renaissance
ENG 4994H Property & Personhood in American Literature
ENG 5024H Anglo-Jewish Poetry and Fiction of the Twentieth Century
ENG 5047H Class in American Literature
ENG 5054H Tough Broads, New York Intellectuals, and American Literary Culture in the Mid-Twentieth Century
ENG 5493H The Limits of Attention: Pound/Ginsberg, Ashbery/Stein
ENG 5575H Theatrical Liberalism
ENG 5583H Human Nature and the Literary Imagination: American Literature (1865-1914)
ENG 5607H Modernism and Narrative Ethics
ENG 5748H Canadian Literature and the Past
ENG 5805H Partition and Secession: Representations in South Asian Literature
ENG 5901H New World African Literature
ENG 5996H Race in Contemporary American Literature
ENG 6038H Authors and Their Institutions
ENG 6043H Introduction to Contemporary Literary Theory
ENG 6045H “Before I was I”: Psychoanalysis and the Enigma of the Child
ENG 6055H Repetition in Modern Thought and Culture
ENG 6155H Actuality, Documentary, Reality
ENG 6156H Dark Passages: Film and the Geometry of Racial Imagination
ENG 6167H The Afterlives of Authors
ENG 6365H Diasporic Englishes
ENG 6504H American Realism and Reform
ENG 6506H The Singularity of Being
ENG 6523H The Return of the Beautiful
ENG 6524H Postcolonial Literature and the World on Paper
ENG 6553H Law as Literature: Figuration and Narrative in the Rhetoric of Judicial Discourse
ENG 6633H Representing Others
ENG 6803H Intertextuality in Feminist Cinema: The Counter-Cinematic Impulse
ENG 6954H Bibliography
ENG 8000H Introduction to Bibliography (Credit/Non-Credit)
ENG 9500H Professional Development (Credit/Non-Credit)
JLE 5075H Orientalism and Opera: Interdisciplinary Approaches

Graduate Faculty

Full Members
Alan Ackerman - BA, MA, PhD
Suzanne Akbari - BA, MA, MPhil, PhD
John Astington - BA, MA, PhD
John Baird - MA, PhD
Alan Bewell - BA, MA, PhD (Chair)
Russell Brown - BA, MA, PhD
J Edward Chamberlin - BA, PhD, FRSC, University Professor
George Elliott Clarke - BA, MA, PhD
Michael Cobb - AM, BA, MA, PhD
Brian Corman - AB, AM, PhD
Melba Cuddy-Keane - BA, MA, PhD
A Hugo de Quehen - BA, PhD
Paul Downes - BA, PhD
Andrew Dubois - BA, PhD
Deborah Esch - MA, PhD
Uzoma Esonwanne - BA, MA, PhD
Gillian Fenwick - BA, BEd, MA, PhD
David Galbraith - BA, MA, PhD
Melane Beth Goldman - BFA, MA, PhD
Richard Greene - BA, MA, DPhil, PhD
Elisabeth Ruth Harvey - BA, MPhil, PhD
Richard Harvey - BA, MA, PhD
Antonette Healey - BA, MA, PhD
Greig Henderson - BA, MA, PhD
Linda Hutcheon - BA, MA, PhD, University Professor, FRSC
Heather Jackson - BA, MA, PhD
Audrey Jaffe - PhD, BA
Daniel Justice - BA, MA, PhD
Chevanyakam Kanaganayakam - BA, PhD
Thomas Keymer
David Klausner - AB, PhD
Anne Lancashire - BA, AM, PhD
D lan Lancashire - BA, MA, PhD
Richard Landon - BA, BLS, MA
Garry Leonard - BA, MA, PhD
Mark Levene - BA, MA, PhD
Jill Levenson - BA, MA, PhD, FRSC
Hao Li - BA, PhD
Victor Li - BA, MA, PhD
Deirdre Lynch - PhD, BA
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Heather Murray - BA, MA, PhD
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Mary Nyquist - BA, MA, PhD
Andrew Orchard - BA, MA, PhD
Julian Patrick - BA, MA, PhD
Carol Percy - BA, MA, DPhil
Ato Quayson - PhD, BA
Magdalene Redekop - BA, MA, PhD
John Reibetanz - BA, MA, PhD
William Robins - BA, MPhil, PhD (Director, Graduate Studies)
Sara Salih - BA, DPhil
Emmeitt Schmitt
Samuel Solecki - BA, MA, PhD
Paul Stevens - BA, MA, PhD, Canada Research Chair
Brian Stock - AB, PhD
Rosemary Sullivan - BA, MA, PhD, Canada Research Chair, FRSC
Neil Ten Kortenaar - MA, PhD
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David Robert Townsend - BA, MA, PhD
Karen Weisman - BA, MA, PhD
Malcolm Woodland - BA, MA, PhD

Members Emeriti
Thomas Adamowski - BA, MA, PhD
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Frederick Asals - BA, MA, PhD
Henry Auster - BA, MA, PhD
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Patricia Bruckmann - AB, MA, PhD
Elspeth Cameron - BA, MA, PhD
Douglas Chambers - MA, PhD
Eleanor Cook - MA, PhD, FRSC
Hans de Groot - MA, PhD
Eric William Domville - BA, PhD
Peter Dooley - BA, MA, PhD
JoAnna Dutka - BA, MA, PhD
Dennis Duffy - AB, MA, PhD
Fredrick Flahiff - BA, MA, PhD
Rene' Ic Graziani - BA, MA, PhD
William Halewood - BA, MA, PhD
Barrie Hayne - BA, AM, PhD
William Howard - BA, STB, MA, PhD
James Jackson - BA, AM, MA, PhD, FRSC, University Professor Emeritus
Alexandra Johnston - MA, PhD, LLB, DD, FRSC
Michael Kirkham - BA, MPhil
Alexander Leggatt - BA, MA, PhD
Hugh Macallum - BA, MA, PhD
Fredrick Marker - AB, DFA
Jane Millgate - BA, MA, PhD, FRSC
Michael Millgate - BA, MA, PhD, FRSC, University Professor Emeritus
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Karen Weisman - BA, MA, PhD
Germaine Warkentin - BA, MA, PhD

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Ann Dooley - BA, MA, PhD
Alexandra Gillespie - BA, MAPHIL
Colin Hill - BA, MA, PhD
Susan Lamb - BA, MA, PhD
Katherine Larson - BMus, BA, MPhil, MSt, PhD
Jeremy Lopez - PhD, MA, BA
Sarah MacLean, BA, MA, PhD
Alice Maurice - BA, PhD
Marjut Ruti - BA, MA, PhD
Nicholas Sammond, BA, MA, PhD
Dana Seiter
Holger Schott Syme - PhD, BA, AM
Christopher Warley
Daniel White - BA, MA, PhD
Sarah Wilson
Ming Xie - PhD
Timothy Yu

English 175
Degree Programs

Environment ENV

Faculty Affiliation
Arts and Science
School of Graduate Studies

Degree Programs Offered
Environmental Science – MEnvSc

Overview
The Centre for Environment (CFE) provides opportunities for an interdisciplinary approach to environmental studies at the University of Toronto. It has both teaching and research functions. Its faculty members are cross-appointed from several departments including engineering, physical sciences, health sciences, biological sciences, forestry, social sciences, and the humanities.

A 12-month professional course-work Master of Environmental Science (MEnvSc) degree program is offered at the University of Toronto Scarborough as a program of the Centre for Environment. All courses within the program fall within the designated major field of study: Biophysical Interactions in Terrestrial and Aquatic Systems. Although the program base is broad, a major focus for training professionals is understanding the flux of contaminants through surface and sub-surface environments and the methods/solutions needed to remediate contaminated or damaged environmental systems. The program is committed to the development of well-trained practitioners in environmental science to meet the needs primarily of industry and government. The program is designed for both newly graduated students and existing professionals in industry and government agencies. The training is also designed to allow students to pursue PhD studies in the environment.

Contact and Address
Environmental Science
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Graduate Program Assistant
Department of Physical and Environmental Sciences
University of Toronto Scarborough
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Toronto, Ontario M1C 1A4
Canada

Degree Programs

Master of Environmental Science
The MEnvSc program offers three streams:
1. Research
2. Internship
3. Part-time studies

Minimum Admission Requirements
• Students are expected to satisfy all requirements for entry into the School of Graduate Studies at the University of Toronto within a competitive selection process.
• Four-year University of Toronto bachelor’s degree, or its equivalent from a recognized university, either in science or engineering with 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 postgraduate work experience, such as in industry, will be considered as part of the admission application.
• Those students lacking one or more essential background courses may be required to take additional courses prior to admission.

Program Requirements
• In all three streams, course work consists of 5.5 full-course equivalents (FCE).
• It is anticipated that students will complete all instructional courses in two sessions and will complete field and research-focused courses as well as the internship during the summer.

Courses
ENV 1100H Advanced Seminar in Environmental Science
ENV 1101Y Research Paper in Environmental Science
ENV 1102H Analytical Chemistry for Geoscientists
ENV 1103H Air and Water Quality Sampling and Monitoring
ENV 1104H Methods for the Detection of Pathogens
ENV 1105H Soil Contamination Chemistry
ENV 1106H Geology and Geophysics of the Shallow Subsurface
ENV 1107H Remediation Methods
ENV 1108H Environmental Science Field Camp
ENV 1109H Advanced Techniques in Geographic Information Systems
ENV 1110H Sediment and Contaminant Transport in Aquatic Systems
ENV 1111H Freshwater Ecology and Biomonitoring
ENV 1112H Boundary Layer Climates and Contaminant Fate
ENV 1113H Groundwater Hydrochemistry and Contaminant Transport
ENV 1114H Directed Readings in Environmental Science I
Degree Programs

ENV 1115H Directed Readings in Environmental Science II
ENV 1116Y Internship
ENV 1117H Climate Change Impact Assessment
ENV 1118H Fundamentals of Ecological Modelling
ENV 1119H The Dynamics of Contaminant Dispersal in Fluids
ENV 1120H Modelling the Fate of Organic Chemicals in the Environment
ENV 1121H Global Environmental Security and Sustainable Development
ENV 1122H Environmental Regulations
ENV 1123H Environmental Project Management
ENV 1125H Contaminated Site Remediation

Graduate Faculty

Full Members
Jonathan Abbatt - BSc, AM, PhD
Barry Adams - BSc, MS, PhD, FCSC, PEng
Grant Allen - BASc, MSc, PhD, PEng
Robert Andrews - BASc, MSc, PhD, PEng
George Arhonditis - BSc, MSc, PhD
Spencer Barrett - BSc, PhD, Canada Research Chair
Terence Blake - BScC, STB, MF, PhD, DipFor
Alana Boland - BA, MAIS, PhD
Brian Branfireun - HBA, MSc, PhD
Michael Bunce - BA, PhD
Philip Byer - SB, SM, PhD, PEng
Catherine Chalin Clark - BSN, MA, PhD, MDiv
Jing Chen - BSc, PhD, FRSC
Donald Cole - BSc, MSc, MD
Tenley Conway - BSc, MA, PhD
Paul Cooper - BScC, MSc, BEd, PhD, Value-Added Wood and Composite Products Chair
Paul Corey - BSc, MA, PhD
Donald Corrnack - BASc, MSc, PhD, FCIC, PEng

Program Director, Environmental Science)
Sharon Cowling - BSc, MSc, PhD
Frank Cunningham - BA, MA, PhD, FRSC
Hilary Cunningham - BA, MA, PhD (Coordinator of Graduate Studies)

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James Eckenwalder - BA, PhD
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Margrit Eichler - MA, LLD, PhD
Mark Engstrom - BS, MS, PhD
Gregory Evans - BASc, MSc, PhD, PEng
Nicholas Eyles - BSc, MSc, PhD, PGeo
Roberta Fulltorpe - BSc, MSc, PhD
William Gough - BSc, MSc, PhD
Leslie Harvey - BSc, MSc, PhD
Nasrat Hussein Hijazi - BSc, PhD, CChem, QPesa
D Linn Holness - MHSc, MD

Environment 177

Thomas Homer-Dixon - BA, PhD
Kenneth Howard - BSc, MSc, PhD, PGeo, CGeol FGS, PHG
Charles Jia - BEng, MEng, PhD, PEng
Shashi Kan - BE, MA, PhD
Bryan Kanney - BASc, MEng, PhD, PEng
Christopher Kennedy - BEng, DipEcon, DIC, MSc, MBA, PhD, PEng
J Gary Knowles - BA, MS, PhD
Scott Mabury - BS, PhD
Laurel MacDowell - BA, MSc, PhD
Virginia MacIarent - BA, MRP, MSc, PhD, MCIP
Heather MacLean - BASc, MBA, MSc, PhD, PEng
Jay Malcolm - BSc, MSc, PhD
David Martell - BASc, MSc, PhD
Patricia McCarney - BA, MCP, PhD
Andrew Miall - BSc, PhD, DSc, Hon Causa, FRSC
Eric Miller - BASc, MSc, PhD, Bahen/Tanenbaum

Professor
GW Kent Moore - BSc, PhD
D Scott Munro - BSc, MSc, PhD
Jennifer Murphy, BCH, DCHEM
Blake Poland - BA, MA, PhD
Anthony Price - BSc, MSc, PhD
Scott Prudham - BARTSc, MA, PhD
Douglas Reeve - BSc, MASC, PhD, PEng, FCIC, FTAPPI, FIAWS, DTech
F. Helen Rodd - BSc, MSc, PhD
Rowan Sage - BA, MS, PhD
Mohini Sain - BSc, BASc, MTech, PhD, PEng
Richard Sandbrook - BA, MA, DPhil, FRSC
Andrea Sass-Kortsak - BSc, MHS, PhD
Lawrence Sawchuk - BA, MA, PhD
Stephen Scharper - BA, MA, PhD
Barbara Sherwood Lollar - BA, PhD
Krystyna Sieciechowicz - BA, MA, PhD
Frances Silverman - BSc, MSc, PhD
Andre Simpson - BSc, PhD
Myrna Simpson - BSc, PhD
Grace Skogstad - BA, MA, PhD
C. Tattersall Smith - BA, MS, PhD
Sandy Smith - BSc, MSc, PhD
Mark Stabile - BA, MA, PhD, Director School of Public Policy and Governance
Ingrid Stefanovic - BA, MA, PhD (Director)
Kimberly Strong - BSc, DPhil
L Wayne Summer - BA, MA, PhD, FRSC, University Professor
Susan Tarlo - MBBS, MRCP, FRCP(C)
Victor Timmer - BScF, MScF, PhD
Ross Edward Upshur - MA, MD, MSc, FRCP(C)
Willem Vanderburg - BASc, MASC, PhD, PEng
Sarah Wakefield - BA, MA, PhD
Denis Wake - BSc, PhD, MPhil, PhD, Canada Research Chair
Frank Wania - Dipl-Geoök, MPhil, PhD
Mathew Wells - BSc, PhD
Peter Wells - BScPhm, PharmD
Rodney White - BA, MSc, PhD
D Dudley Williams - BSc, DipEd, MSc, PhD, DSc
Degree Programs

Members Emeriti
Paul Aird - BScAgr, MS, PhD
Rorke Bryan - BA, PhD
Frances Burton - BSc, MA, PhD
Brian Greenwood - BSc, PhD, Hon Causa
William Michelson - AB, AM, PhD, FRSC
Henry Regier - PhD
Dibyendu Roy - BSc, MSc, DPhil, FRSC
Richard Stren - BA, MA, PhD
Edmund Sullivan - PhD
Joseph Whitney - PhD, MCIP
George Williams - BSc, Dr Science

Associate Members
Jane Ambachtsheer - BA, MA
Nathan Basiliko - PhD
Bradley Bass - BA, MSc, PhD
Kerry Bowman – BA, BSW, MSW, PhD
Quentin Chiotti – BA, MA, PhD
James Dooley - BASc, MASc, PhD
Andrew Green - BA, MA, LLB, LLM, JSD
Angelo Grima - BA, MA, PhD
H Roland Hosein - BSc, MSc, PhD
Andrew Kenney - BSc, MSc, PhD
Sonia Labatt - BA, MA, PhD
Douglas Macdonald - BA, MA, PhD
Susan McGeachie - BA; MBA
Monirul Mirza - BSE, MScEng, PhD
Paul Muldoon - BA, LLB, MA, LLM
Robert Munn - BA, MA, PhD
Barbara Murck - BA, PhD
Dennis O’Hara – BA, MDiv, PhD
Stefan Salbach - BASc, MASc, PEng
Beth Savan - BSc, PhD, MCIP
Lesbia Smith - MD
Peter Telford - BSc, PhD
Kathleen Wilson - BA, MA, PhD
Mark Winfield - BA; MA; PhD
Clare Wiseman – BS, MSc, PhD
Cindy Woodland - BSc, MSc, PhD
European, Russian, and Eurasian Studies  

Faculty Affiliation
Arts and Science

Degree Programs Offered
European, Russian, and Eurasian Studies – MA, JD/MA

Collaborative Programs Offered
Degree programs that participate in:
1. Ethnic and Pluralism Studies, see p. 445
   • European, Russian and Eurasian Studies, MA

Overview
The Master of Arts programs in European, Russian and Eurasian Studies (MA ERES) are designed to provide a well-rounded education in European, Russian 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 specialisation in the European, Russian and Eurasian area.

The Combined Juris Doctor/Master of Arts Program provides specialised professional training for those seeking a career in law in the changing environment of the post-communist world. Firms selling or manufacturing in the region need 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, Russian and Eurasian Studies.

Contact and Address
Web: www.utoronto.ca/ceres/
E-mail: ceres.admin@utoronto.ca
Telephone: (416) 946-8938
Fax: (416) 946-8939

Centre for European, Russian, and Eurasian Studies
Room 125N
Munk Centre for International Studies
1 Devonshire Place
University of Toronto
Toronto, Ontario M5S 3K7
Canada

Degree Programs

Master of Arts

Minimum Admission Requirements
- Applicants are accepted under the general regulations of the School of Graduate Studies.
- 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.

Program Requirements
- Minimum of two sessions of full-time graduate study.
- Students will be required to take 6.0 full-course equivalents (FCE). Of the 6.0 FCE, at least 2.0 FCE must be taken in a discipline chosen by students as their major discipline and 1.0 FCE must be ERE 2000Y, the interdisciplinary core course. It must be taken in the second year of the program. The remaining courses must be drawn from at least two disciplines other than the major discipline.

Combined Juris Doctor/Master of Arts (European, Russian, and Eurasian Studies)

Minimum Admission Requirements
- Applicants must separately apply to and be accepted by both the JD program and the MA (European, Russian, and Eurasian Studies) programs. They must satisfy the normal admission requirements for each program.
- Applicants who have completed a year in the European, Russian, and Eurasian Studies master's program or the first year of the JD can apply for admission to the combined program.

Program Requirements
- Year 1 - Students are admitted to the Faculty of Law and receive deferred admission to the MA program in European, Russian, and Eurasian Studies. The first year of study will consist of requirements for the first year of the JD.
- Years 2, 3, and 4 - Students pursue credits in Law as well as in European, Russian, and Eurasian Studies.
Courses
Not all courses are offered every year. Consult the centre and individual departments for course availability.

Required
ERE 2000Y Research Seminar
ERE 2001H Gateway Pro-Seminar to European, Russian, and Eurasian Studies

Optional

Anthropology
ANT 5146H Colonial and Postcolonial Discourses
ANT 6020H The Political Economy of Global/Local Dialectics
JSA 5147H Language, Nationalism and Post-Nationalism

Comparative Literature
COL 5027H Memory, Trauma, and History
COL 5031H Russian Avantgarde Concepts in Art and Literature: Symbolism, Futurism, Constructivism, Formalism

Economics
ERE 1198H Europe’s Eastward Enlargement

Film and Music
ERE 1187H Music in Russian Culture

Germanic Languages and Literatures
GER 1200H Middle High German
GER 1300H Cultural History of the German Language
GER 1470H Goethe in Context
GER 1661H Modernism in Context
GER 1720H The Politics of the Non-Fiction Film
GER 1780H Topics in German Visual Culture
GER 1830H Topics in German Intellectual History
JGC 1750H Modernity and Its Discontents

History
ERE 1186H The Past As Prologue: East Central and Southeastern Europe in the Interwar Period
ERE 1190H Peasants in Russia and East Europe
ERE 1191H Contemporary Southeastern Europe
HIS 1279H World War II in East Central Europe (joint graduate/undergraduate)
HIS 1280Y History of Soviet Cinema (joint graduate/undergraduate)
HIS 1281H Experiences of Real Socialism
HIS 1282H Totalitarian Culture
HIS 1283H War, Plague and Hunger in the Early Modern Baltic
HIS 1284H The Baltic World
HIS 1285H The Ukrainian National Revival
HIS 1287H Polish Jews Since the Partitions of Poland
HIS 1288H Age of Experiments
HIS 1291H Topics in Russian and Soviet Social History
HIS 1292H The Russian Revolution
HIS 1293Y Kievian Rus’
HIS 1294Y Soviet History Seminar
HIS 1297H Problems of Political Survival in Eastern Europe Since 1848
HIS 1298H Problems in the Social and Cultural History of Imperial Russia
HIS 1299H Topics in Russian Intellectual History
JHP 1289Y Twentieth-Century Ukraine
JHP 2301Y Linguistic and Cultural Minorities in Europe

Political Science
ERE 1184H Polls and Public Opinion in Post-Communist Countries
ERE 1188H Public Policy in Post-Communist Eastern Europe
ERE 1192H Majorities and Minorities in Southeastern Europe
ERE 1194H State and Society in Post-Soviet Central Asia
ERE 2001H Gateway Pro-Seminar to European, Russian and Eurasian Studies
JHP 1289Y Twentieth-Century Ukraine
JHP 2301Y Linguistic and Cultural Minorities in Europe
POL 2004Y Marxism
POL 2304Y Soviet and Post-Soviet Politics
POL 2308Y Politics and Government of Eastern Europe
POL 2324H Ethnonationalism and State-Building: The Communist and Post-Communist Experience
POL 2325Y The Politics of Post-Communism

Slavic Languages and Literatures
For a full listing of courses, see the Slavic Languages and Literatures entry in this calendar.

Croatian and Serbian Literatures
SLA 1507H Modern Croatian Bards
SLA 1517H Modern Serbian Bards
SLA 1520H Bosnia in Literature and Culture: Between Croats and Serbs
SLA 1521H Topics in Modern Croatian Literature
SLA 1522Y The Modern Serbian Novel
SLA 1537H Political Drama from Dubrovnik to the Danube
SLA 1547H South Slavic Folklore

Czech and Slovak Literatures
SLA 1600Y Studies in Czech and Slovak Literatures
SLA 1601Y Modern Czech Fiction
SLA 1603Y Readings in Czech/Russian Literary Theory
SLA 1604Y History of the Czech Literary Language
SLA 1605Y Modern Czech Drama and Theatre
SLA 1606H Czech Short Story

Estonian Literature
SLA 1420Y Estonian National Identity
SLA 1421Y Women in East European Fiction

Hungarian Literature
HUN 1440Y The Modern Hungarian Novel
HUN 1450H Hungarian Drama
HUN 1451H Three Hungarian Film Directors

180 European, Russian and Eurasian Studies
## Degree Programs

### Polish Literature

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
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<tbody>
<tr>
<td>SLA 1304H</td>
<td>Staging God, Man, and History: Polish Drama and Theatre in Context</td>
</tr>
<tr>
<td>SLA 1305Y</td>
<td>Polish Fiction or A Disrupted Funeral of the Novel</td>
</tr>
<tr>
<td>SLA 1306H</td>
<td>Polish Poetry: Shaping the National Canon</td>
</tr>
<tr>
<td>SLA 1307H</td>
<td>Studies in Polish Poetry: Twentieth Century</td>
</tr>
<tr>
<td>SLA 1308Y</td>
<td>Topics in Polish Literature</td>
</tr>
<tr>
<td>SLA 1310H</td>
<td>Revolutions in the Theatre: Stanislavski, Meyerhold, Grotowski, and Kantor</td>
</tr>
<tr>
<td>SLA 1312Y</td>
<td>Modernism and Postmodernism in Polish Literature in the Twentieth Century and Beyond</td>
</tr>
<tr>
<td>SLA 1331H</td>
<td>Imagining &quot;The Other&quot; in Polish Literature and Culture</td>
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</table>

### Russian Literature

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>SLA 1201Y</td>
<td>Studies in the Russian Novel</td>
</tr>
<tr>
<td>SLA 1203Y</td>
<td>Studies in Russian Modernism</td>
</tr>
<tr>
<td>SLA 1204H</td>
<td>Contemporary Russian Literature</td>
</tr>
<tr>
<td>SLA 1205H</td>
<td>Literary Scandals in Twentieth-Century Russia</td>
</tr>
<tr>
<td>SLA 1210H</td>
<td>Studies in Medieval Russian Literature</td>
</tr>
<tr>
<td>SLA 1211Y</td>
<td>Studies in the Russian Drama: Eighteenth to Twentieth Centuries</td>
</tr>
<tr>
<td>SLA 1212H</td>
<td>Gogol</td>
</tr>
<tr>
<td>SLA 1215H</td>
<td>Studies in Russian Literature of the Eighteenth Century</td>
</tr>
<tr>
<td>SLA 1225H</td>
<td>Russian Literature and Criticism in the 1860s</td>
</tr>
<tr>
<td>SLA 1230Y</td>
<td>Russian Emigré Literature, 1917-1945</td>
</tr>
<tr>
<td>SLA 1231H</td>
<td>Twentieth Century Russian Prose I: Modernism, Avant-garde, Totalitarianism</td>
</tr>
<tr>
<td>SLA 1232H</td>
<td>Russian Symbolism</td>
</tr>
<tr>
<td>SLA 1233H</td>
<td>Studies in Modern Russian Poets</td>
</tr>
<tr>
<td>SLA 1234H</td>
<td>Dostoevsky</td>
</tr>
<tr>
<td>SLA 1235H</td>
<td>Pasternak</td>
</tr>
<tr>
<td>SLA 1236Y</td>
<td>Pushkin</td>
</tr>
<tr>
<td>SLA 1237H</td>
<td>Twentieth-Century Russian Prose II: Internal and External Exile</td>
</tr>
<tr>
<td>SLA 1238H</td>
<td>Chekhov</td>
</tr>
<tr>
<td>SLA 1239H</td>
<td>Vladimir Nabokov's American Novels</td>
</tr>
<tr>
<td>SLA 1240H</td>
<td>L. Tolstoy</td>
</tr>
<tr>
<td>SLA 1243H</td>
<td>Leskov</td>
</tr>
<tr>
<td>SLA 1250H</td>
<td>Russian Journalism: 1830-1860, The Formative Decades</td>
</tr>
<tr>
<td>SLA 1251H</td>
<td>Pushkin and His Age</td>
</tr>
<tr>
<td>SLA 1900Y</td>
<td>Russian Poetry (for M.A. students only)</td>
</tr>
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</table>

### Ukrainian Literature

<table>
<thead>
<tr>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
<td>SLA 1039Y</td>
<td>Kyiv-Kiev-Kijow: A City Through Cultures and Centuries</td>
</tr>
<tr>
<td>SLA 1402Y</td>
<td>Studies in Ukrainian Modernism</td>
</tr>
<tr>
<td>SLA 1403Y</td>
<td>Studies in Contemporary Ukrainian Literature</td>
</tr>
<tr>
<td>SLA 1404Y</td>
<td>Studies in Ukrainian Poets</td>
</tr>
<tr>
<td>SLA 1405Y</td>
<td>Experiments in Ukrainian Prose</td>
</tr>
<tr>
<td>SLA 1406Y</td>
<td>Studies in Ukrainian Literary Criticism</td>
</tr>
<tr>
<td>SLA 1407H</td>
<td>Aspects of Literary Translation of Ukrainian</td>
</tr>
</tbody>
</table>

### Slavic Linguistics

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>SLA 1101Y</td>
<td>History of the Russian Language (PR)</td>
</tr>
<tr>
<td>SLA 1102Y</td>
<td>Advanced Russian Language Skills</td>
</tr>
<tr>
<td>SLA 1103H</td>
<td>Comparative South Slavic Linguistics</td>
</tr>
<tr>
<td>SLA 1104Y</td>
<td>Old Church Slavonic</td>
</tr>
<tr>
<td>SLA 1105Y</td>
<td>Structure of Russian</td>
</tr>
<tr>
<td>SLA 1106H</td>
<td>Proseminar in Diachronic Slavic Linguistics</td>
</tr>
<tr>
<td>SLA 1107H</td>
<td>Comparative West Slavic Linguistics</td>
</tr>
<tr>
<td>SLA 1108H</td>
<td>Slavic Dialectology</td>
</tr>
<tr>
<td>SLA 1109H</td>
<td>Old Church Slavonic Translation Technique</td>
</tr>
<tr>
<td>SLA 1110H</td>
<td>Comparative Historical Slavic Linguistics</td>
</tr>
<tr>
<td>SLA 1112H</td>
<td>Tense, Aspect, and Mood in Slavic</td>
</tr>
<tr>
<td>SLA 1141H</td>
<td>History of the Ukrainian Language</td>
</tr>
<tr>
<td>SLA 1142H</td>
<td>Style and Structure of Ukrainian</td>
</tr>
<tr>
<td>SLA 1150H</td>
<td>Russian Since the Revolution</td>
</tr>
<tr>
<td>SLA 1160H</td>
<td>Proseminar in Synchronic Slavic Linguistics</td>
</tr>
<tr>
<td>SLA 1161H</td>
<td>An Introduction to Areal Linguistics: The Balkan Sprachbund</td>
</tr>
</tbody>
</table>

### General Slavic

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>SLA 1036H</td>
<td>Metamorphosis of Modernity in Central Europe</td>
</tr>
<tr>
<td>SLA 1037Y</td>
<td>Theatre and Cinema in Extremis: Staging Twentieth-Century Aesthetics and Politics</td>
</tr>
<tr>
<td>SLA 1038H</td>
<td>Magic Prague</td>
</tr>
</tbody>
</table>

### Reading and Research Courses

- ERE 1997Y Reading and Research III
- ERE 1999H Reading and Research II

For further information about graduate programs and study grants, please contact the Director.

### Graduate Faculty

#### Full Members

- Veronika Ambros - BA, MA, PhD
- Robert Austin - BA, MA, PhD
- Christopher Barnes - BA, MA, PhD
- Michal Bodemann - BA, MA, PhD
- Ralph Bogert - BA, MA, PhD
- Aurel Braun - BA, MA, PhD
- Robert Brym - BA, MA, PhD
- Richard Day - BA, MA, Dip REES, PhD
- Martin Dimnik - BA, MA, MDiv, DPhil
- E Wayne Dowler - BA, AM, PhD
- Harriet Friedmann - AB, MA, PhD
- Robert Johnson - BA, MA, PhD
- Juri Kivimae - BA, PhD
- Jeffrey Kopstein - BA, MA, PhD
- Christina Kramer - BA, MA, PhD
- Nikolai Krementsov - Candidate of Sciences
- Thomas Lahuusen - BA, MA, PhD

---

European, Russian and Eurasian Studies 181
Degree Programs

Leonid Livak
Paul Magocsi - AB, MA, MA, PhD, FRSC
John Noyes - BA, MA, PhD
Donna Orwin - BA, MA, PhD
Victor Ostapchuk - BA, PhD
Ronald Pruessen - BA, MA, PhD
James Retailack - BA, DPhil
Andrew Rossos - BA, MA, PhD
Joseph Schallert - BA, MA, MA, PhD
Donald Schwartz - BA, MA, PhD
Becky Sigmon - BA, MS, PhD
Samuel Solecki - BA, MA, PhD
Peter Solomon - BA, MA, CertRussInst, PhD
Susan Solomon - BA, MA, CertRussInst, PhD
Maria Subtelny - BA, PhD
Maxim Tarnawsky - BA, PhD
Lynne Viola - BA, MA, PhD
Barry Wellman - BA, MA, PhD
Rebecca Wittmann - BA, MA, PhD
Piotr Jan Wrobel - BA, PhD

Members Emeriti
George Bisztray - PhD
Harvey Dyck - BA, MA, PhD
Scott Eddie - BS, PhD
Richard Gregor - BA, MA, PhD
Franklyn Jc Griffiths - BA, MIA, PhD
Wsevolod Isajiw - BA, MA, PhD
Kenneth Lantz - BA, MA, PhD
Ralph Lindheim - BA, MA

Associate Members
Sheila Campbell - BA, MA, PhD
Randall Hansen - BA, MPhil, DPhil, Canada Research Chair
Jennifer Jenkins - BA, MA, PhD
Eric Jennings - BA, MA, PhD
Edith Klein - PhD
Karen Knop - BSc, LLB, LLM, SJD
Ann Komaromi - BA, MA, PhD
Taras Koznarsky - MA, PhD
Edward Schatz - PhD
Michal Schonberg - BA, MA, PhD
Alison Smith - BA, MA, PhD
Tamara Trojanowska - BA, MA, PhD
Borje Vahamaki - BA, MA, MA, PhLic, PhD, Docent
Lucan Alan Way - BA, MA, PhD

182 European, Russian and Eurasian Studies
Exercise Sciences  EXS

Faculty Affiliation
Physical Education and Health

Degree Programs Offered
Exercise Sciences – MSc, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Addiction Studies, see p. 406
   • Exercise Science, MSc, PhD
2. Aging, Palliative and Supportive Care Across the Life Course, see p. 408
   • Exercise Science, MSc, PhD
3. Cardiovascular Sciences, see p. 426
   • Exercise Science, MSc, PhD
4. Women and Gender Studies, see p. 473
   • Exercise Science, MSc, PhD
5. Women’s Health, see p. 478
   • Exercise Science, MSc, PhD

Overview
The field of exercise sciences is interdisciplinary. The Graduate Department of Exercise Sciences offers Master of Science and Doctor of Philosophy programs for students interested in research, academic, and professional careers relating to:
1. Applied/exercise/environmental physiology
2. Metabolic and endocrinological aspects of physical activity
3. Motor control and motor learning
4. Muscle physiology
5. Physical fitness
6. Psychological aspects of sport and physical activity
7. Psychophysiological aspects of exercise and stress
8. Sociocultural aspects of sport and physical activity
9. Women’s health and physical activity

Contact and Address
Web: www.ac-fpeh.com/
E-mail: exs.fpeh@utoronto.ca
Telephone: (416) 978-6087
Fax: (416) 971-2118

Graduate Department of Exercise Sciences
Faculty of Physical Education and Health
55 Harbord Street
Toronto, Ontario  M5S 2W6
Canada

Degree Programs

Master of Science

Minimum Admission Requirements
• General regulations of the School of Graduate Studies.
• Applications must be received by February 1.
• Four-year degree, or its equivalent, in physical education and health or a related discipline from a recognized university.

Program Requirements
• Completion of all degree requirements within five years of first registration in the program.
• Successful completion of 2.5 full-course equivalents (FCE) as follows. All courses must be approved in advance by the student's supervisor and the Graduate Department of Exercise Sciences.
  o 0.5 FCE in exercise sciences from the student's area of study
  o 0.5 FCE from the Exercise Sciences offerings
  o 0.5 FCE from another department
  o 0.5 FCE from either Exercise Sciences or another department
  o 0.5 FCE in an appropriate methodology
• 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 and the Graduate Department of Exercise Sciences.
• The Master of Science program may be taken part-time.

Doctor of Philosophy

Minimum Admission Requirements
• General regulations of the School of Graduate Studies.
• Completion of a M.A. or M.Sc. with a thesis in a related field.
• Provide satisfactory references pertaining to academic and research abilities.
• Applications must be received by February 1.

Program Requirements

Full-time PhD
• Full-time registration (fall, spring, summer sessions) throughout the entire doctoral program.
• Completion of all degree requirements within six years from first registration in the program. Thereafter, students may apply for a maximum of two extensions.
Degree Programs

- Successful completion of 3.0 full-course equivalents (FCE) as follows.
  - 0.5 FCE in exercise sciences from the student's area of study
  - 1.0 FCE from the Exercise Sciences offerings
  - 0.5 FCE from another department
  - 0.5 FCE from either Exercise Sciences or another department
  - 0.5 FCE in an appropriate methodology
- All courses must be approved in advance by the student's supervisor and the Graduate Department of Exercise Sciences.
- 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 Exercise Sciences.
- Oral defence of the thesis before an examination committee appointed by the School of Graduate Studies.
- Student's annual program plan must be approved by the supervisor and the Graduate Department of Exercise Sciences.

Flexible-time PhD
- With the approval of the Associate Dean, Graduate Education and Research, 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.
- A flexible-time student is required to 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.

Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>EXS 5503H</td>
<td>Adaptations to Habitual Activity</td>
</tr>
<tr>
<td>EXS 5507H</td>
<td>Desire and Bodies in Place</td>
</tr>
<tr>
<td>EXS 5508H</td>
<td>Cardiovascular Disease and Exercise</td>
</tr>
<tr>
<td>EXS 5509H</td>
<td>Applied Muscle Physiology and Biochemistry</td>
</tr>
<tr>
<td>EXS 5511H</td>
<td>Hormonal Aspects of Women's Health and Exercise: A Focus on Reproductive and Bone Health Issues</td>
</tr>
<tr>
<td>EXS 5513H</td>
<td>Current Issues in Exercise Psychology</td>
</tr>
<tr>
<td>EXS 5516H</td>
<td>Exercise Psychology</td>
</tr>
<tr>
<td>EXS 5517H</td>
<td>Public Policy and Physical Activity in Canada</td>
</tr>
<tr>
<td>EXS 5518H</td>
<td>Theoretical Issues in the Sociocultural Study of Physical Activity and Health</td>
</tr>
<tr>
<td>EXS 5519H</td>
<td>Theories of the Body and Transcendence</td>
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<tbody>
<tr>
<td>EXS 5520H</td>
<td>Positive Psychology: Psychosocial Factors in Optimal Health and Wellness</td>
</tr>
<tr>
<td>EXS 5521H</td>
<td>Stress and Coping</td>
</tr>
<tr>
<td>EXS 7001H</td>
<td>Directed Reading in Exercise Sciences</td>
</tr>
<tr>
<td>EXS 7002H</td>
<td>Directed Research Project in Exercise Sciences</td>
</tr>
<tr>
<td>JXP 5807H</td>
<td>Health Communications</td>
</tr>
</tbody>
</table>

Graduate Faculty

Full Members
Kenneth Allison - BSc, BPHE, MHSc, MSc, PhD
Kenneth Chapman - MSc, MD
Paul Corey - BSc, MA, PhD
Peter Donnelly - BA, MS, PhD
Guy Faulkner - BEd, MSc, PhD
Geoffrey Fernie - BSc, PhD, PEng, CCE
Jack Goodman - BPHE, MSc, PhD
Ronald Heslegrave - PhD
Ira Jacobs - DipPE, MHK, DMedSci
Gretchen Kerr - BPHE, MA, PhD
Bruce Kidd - BA, AM, MA, PhD, OC
Larry Leith - BA, MA, PhD
Helen Lenskyj - BA, MA, PhD
Marius Locke - BA, BSc, PhD
Margaret MacNeill - BPHE, MA, PhD
Lynda Mainwaring - BA, BHK, MHK, PhD, CPsych
Nancy McKee - MD, FRCS(C)
Tom McLellan - BSc, BA, BEd, MA, PhD
Michael Pilyey - BSc, PhD
Carol Rodgers - BPE, MHK, PhD
Pang Shek - BSc, MSc, PhD
Frances Silverman - BSc, MSc, PhD
Scott Thomas - BSc, MSc, PhD (Associate Dean, Graduate Studies)
Luc Tremblay - BSc, MSc, PhD

Members Emeriti
Robert Goode - BPHE, BA, MA, DPhil
Manny Radomski - BSc, MSc, PhD
Roy Shephard - BSc, MBBS, MD (Lond), PHD, DPE (Hon Caus), FACSM, FFISM

Associate Members
Catherine Amara
Caroline Fusco - BA, CertEd, MSc, PhD
Cathy Notarius - BPHE, MSc, PhD
Paul Oh - MSc, MD, FRCPFC
Shawn Rhind - BPHE, PhD
Degree Programs

Forestry

Faculty Affiliation
Forestry

Degree Programs Offered
Forest Conservation - MFC
Forestry - MScF, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Environmental Studies, see p. 443
   • Forest Conservation, MFC
   • Forestry, MScF PhD

Overview
The Faculty of Forestry offers degree programs leading to the Master of Forest Conservation (MFC), Master of Science in Forestry (MScF), and the Doctor of Philosophy (PhD).

The Master of Forest Conservation, the Faculty’s professionally-oriented master’s degree, is an intensive 16-month course-based program with a strong focus on field and laboratory practical training, Canadian and foreign residential field courses, practical internships and individual and group research. It provides a strong, coherent professional education in forest conservation to students from diverse backgrounds.

The Master of Science in Forestry and Doctor of Philosophy programs are research/thesis-based degrees in areas of specialization relevant to faculty expertise and funding including, but not limited to, 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 Faculty considers applicants from a variety of undergraduate backgrounds including forestry; applied science and engineering; and social, physical, and biological sciences.

Contact and Address
Web: www.forestry.utoronto.ca
E-mail: gradprog@forestry.utoronto.ca
Telephone: (416) 946-7952
Fax: (416) 978-3834

Graduate Department of Forestry
Earth Sciences Centre
33 Willcocks Street
University of Toronto
Toronto, Ontario M5S 3B3
Canada

Degree Programs

Forest Conservation

Master of Forest Conservation

Minimum Admission Requirements
• General regulations of the School of Graduate Studies.
• Honours or specialist bachelor’s degree with a minimum of mid-B standing in each of the final two years of the bachelor’s program. 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 Faculty but may be advised to take some appropriate background courses prior to admission.
• Additional documentation to the department with completed application forms and transcripts, including three references, a letter of interest in the MFC program, and a resume. Full instructions and forms are available via the Faculty’s Web site.

Program Requirements
• The 16-month program starts in September and requires full-time intensive involvement throughout.
• A core of 5.0 integrated full-course equivalents (FCE), 0.5 residential field camp FCE (FOR 3011H), 1.5 elective FCE, and 0.5 internship FCE (FOR 3007H) during the summer session in which students work on practical forest conservation projects, either in Canada or abroad.
• It is also possible to earn the MFC degree through part-time studies. Information on specific course requirements and program schedules is included on the Faculty’s Web site.

Forestry

Master of Science in Forestry

Minimum Admission Requirements
• General regulations of the School of Graduate Studies.
• Appropriate four-year bachelor’s degree from an approved university, with a standing of at least a mid-B in the final year of the bachelor’s degree. A minimum of B+ is required for the collaborative program.
• Additional documentation must be submitted to the department with completed application forms and transcripts, including three references, a letter of intent, a resume, and a “writing sample”. Full instructions and forms are available via the Faculty’s Web site.
Degree Programs

Program Requirements
- Program is prepared by the student in consultation with a supervisory committee and must be approved in sequence by the supervisory committee, the Graduate Committee of the Faculty of Forestry, and the School of Graduate Studies.
- Under exceptional circumstances, a part-time program may be arranged on application to and approval by the Faculty and the School of Graduate Studies.
- Minimal requirements for this degree are:
  - 12 months of residence including two academic sessions.
  - 1.5 FCE, of which at least 0.5 FCE is taken within the Faculty, plus, in the case of students with non-forestry backgrounds, one of FOR 3000H, FOR 3002H, FOR 3003H, FOR 3004H, FOR 3009H, or FOR 3010H, on the recommendation of the student's supervisory committee and approval of the Graduate Coordinator. Depending on the student's background, additional or alternative course work may be required.
  - Credit in FOR 1000H and FOR 1001H.
  - The preparation of a research thesis of acceptable quality and its oral defence.
  - All requirements for the MScF degree must be completed within five years from the date of first enrolment in the program.

Doctor of Philosophy

Minimum Admission Requirements
- Students are admitted to the four-year PhD program via one of three routes:
  - Master's degree - an appropriate University of Toronto master's degree with at least an A standing, or equivalent from a recognized university, in a discipline appropriate to the intended field of doctoral study and research.
  - Direct entry - in exceptional circumstances, an extraordinarily strong applicant with an appropriate four-year University of Toronto bachelor's degree, or equivalent from a recognized university.
  - Transfer from MScF to PhD - under certain specific conditions, outstanding registered MScF students may be considered by the end of their first year in the MScF program for transfer to the PhD program.
- Applicants must submit additional documentation to the department with completed application forms and transcripts, including three references, a letter of intent, a resume, and a "writing sample". Full instructions and forms are available via the Faculty's Web site.

Program Requirements
- Minimum PhD program requirements:
  - A minimum of 2.0 FCE must be taken. Depending on the student's background and academic goals, additional or alternative course work may be required by the student's supervisory committee, including courses outside the Faculty of Forestry.
  - Credit in FOR 1000H and FOR 1001H.
  - Students approved for transfer from the MScF to the PhD are required to complete, as a minimum, the MScF course requirements (including FOR 1000H and FOR 1001H, plus 1.5 FCE) plus 0.5 additional FCE.
  - For students with a non-forestry background, credit in one of FOR 3000H, FOR 3002H, FOR 3003H, FOR 3004H, FOR 3009H, or FOR 3010H, on the recommendation of the student's supervisory committee and approval of the Graduate Coordinator.
  - Successful completion of a comprehensive examination. This will ordinarily be taken early in the second year of the program.
  - Preparation and defence of a thesis that is an original and independent research work adding significantly to the existing body of knowledge.
  - A full-time commitment is expected for a minimum of the first two years in the forestry program.

Courses
The Faculty of Forestry offers the following courses. Courses in the 3000 number series are expected to be offered each year; 1000-level courses may be withdrawn in any particular year, depending on student interest/need and departmental resources. Students should consult the departmental brochure each session to confirm availability.

A maximum of one directed studies course taken with a student's supervisor can be credited toward meeting departmental degree program requirements.

FOR 1000H Research Methods in Forestry (Credit/No Credit)
FOR 1001H Graduate Seminar (Credit/No Credit)
FOR 1060H Soil Fertility and Tree Nutrition
FOR 1280H Wood Products and Processing
FOR 1282H Wood Chemistry
FOR 1284H Bonding and Adhesion Technology
FOR 1286H Natural Fibre Production Technology
FOR 1288H Wood Composites Processing
FOR 1290H Wood and Material Science
FOR 1292H Long Term Performance and Durability of Wood-Based Materials
FOR 1311H Physiological Ecology of Woody Plants
FOR 1321H Stand Structure and Dynamics

Courses which may continue over a program. The course is graded when completed.
Degree Programs

**FOR 1331H** Advanced Forest Entomology
**FOR 1412H** Natural Resource Management I (Directed Studies Course)
**FOR 1413H** Natural Resource Management II (Directed Studies Course)
**FOR 1414H** Forest Fire Management Systems
**FOR 1415H** Decision-Making in Forest Management
**JBF 1436H** Forest Landscape Ecology and Methods
**JFS 1460H** Community Based Natural Resource Management
**FOR 1470H** International Trade, Environment and Sustainable Development
**FOR 1555H** Wildlife Ecology and Conservation
**FOR 1570H** Ecological Principles of Agroforestry
**FOR 1575H** Urban Forest Conservation
**FOR 1580H** Ecology, Management, and Conservation of Tropical Forests
**FOR 1585H** Urban Forest Conservation Field Camp
**FOR 1610H** Forest Policy Development and Issues
**FOR 1900H** Advanced Topics in Forestry I (Directed Studies Course)
**FOR 1901H** Advanced Topics in Forestry II (Directed Studies Course)
**FOR 3000H** Current Issues in Forest Conservation
**FOR 3001H** Biodiversity of Forest Organisms
**FOR 3002H** Applied Forest Ecology and Silviculture
**FOR 3003H** Economics of Forest Ecosystems
**FOR 3004H** Forest Management Decision Support Systems
**FOR 3005H** Stresses in the Forest Environment
**FOR 3006H** Case Study Analysis in Forest Management
**FOR 3007H** Internship in Forest Conservation (Credit/No Credit)
**FOR 3008H** Research Paper in Forest Conservation
**FOR 3009H** Forest Conservation Biology
**FOR 3010H** Sustainable Forest Management and Certification
**FOR 3011H** International Forest Conservation Field Camp (Credit/No Credit)
**FOR 3012H** Analytical Methods in Forestry

**Graduate Faculty**

**Full Members**
- D Grant Allen - BASc, MASc, PhD, PEng
- Terence Blake - BScF, STB, MF, PhD, DipFor
- Rorke Bryan - BA, PhD
- Malcolm Campbell - BSc, MSc, PhD
- Terence Carleton - BSc, MSc, PhD
- John Caspersen - BA, PhD
- Paul Cooper - BScF, MSc, BEd, PhD, Value-Added Wood and Composite Products Chair
- Sharon Cowling - BSc, MSc, PhD
- James Eckenwalder - BA, PhD

**Associate Members**
- Marie-Josee Fortin - BSc, MSc, PhD
- Shashi Kant - BE, MA, PhD (Coordinator of Graduate Studies)
- Mark Kortschot - BASc, MASc, PhD, PEng
- Jay Malcolm - BSc, MSc, PhD
- David Martell - BASc, MASc, PhD
- Chul Park - BS, MS, PhD, PEng, Canada Research Chair
- Anthony Price - BSc, MSc, PhD
- Douglas Reeve - BSc, MASc, PhD, PEng, FCIC, FTAPPI, FIAWS, DTech
- Rowan Sage - BA, MS, PhD
- Mohini Sain - BSc, BASc, MTech, PhD, PEng
- C.Tattersall Smith - BA, MS, PhD (Chair)
- Sandy Smith - BSc, MSc, PhD
- Jan Spelt - BASc, MASc, ME, PhD, PEng
- Sean Thomas - BA, PhD, Canada Research Chair
- Victor Timmer - BScF, MScF, PhD
- Ning Yan - BASc, PhD, PENG

**Members Emeriti**
- Paul Aird - BScAgr, MS, PhD
- John Balatinecz - BScF, MF, PhD, PEng
- Martin Hubbes - DiplIngAgr, DrAgr
- Robert Jefferies - BSc, PhD
- Jagdish Nautiyal - BSc, AIFC, MF, PhD
- Dibyendu Roy - BSc, MSc, DPhil, FRSC

**Associate Members**
- David Balsillie - BSc, MSc, PhD
- Isabel Bellooq - LIC, PhD
- Darwin Burgess
- William Cole - MBBS, PhD
- Stephen Colombo - BScF, MScF, PhD
- Laercio Couto
- Peter de Groot - BScF, PhD
- Peter Duinker
- Michael Dumas - BSc, MScF, PhD
- Richard Fleming - BSc, PhD
- Darrick V Heyd
- Andrew Kenney - BSc, MSc, PhD
- Susanna Laaksonen-Craig - MSc, PhD
- Jagmohan Maini
- Deborah McGregor - BSc, MES, PhD
- Dave McLaughlin - BScF, MScF
- Jose de Jesus Navar - BScF, MScF, PhD
- Brian Naylor - BScF, PhD
- Kristinla Oksman - MSc, PhD
- Danijela Puric-Mladenovic
- Justina Ray - BS, MS, PhD
- Jacques Regniere - BSc PhD
- Cheria Sastry
- Peter C. Schleifenbaum - PhD
- Heinrich Speck
- Brian Stocks - BSc, MScF
- Sen Wang
- Brian Michael Wotton
- S.Y. Tony Zhang
- Barbara Zimmerman - BSc, MSc, PhD

+Extended course. For academic reasons, course work is extended into session following academic session in which course is offered.
French Language and Literature  FRE

Faculty Affiliation  
Arts and Science

Degree Programs Offered  
French Language and Literature – MA, PhD

Collaborative Programs Offered  
Degree programs that participate in:
1. Book History and Print Culture, see p. 424
   • French Language and Literature, MA, PhD
2. Editing Medieval Text, see p. 437
   • French Language and Literature, PhD
3. Women and Gender Studies, see p. 473
   • French Language and Literature, MA, PhD

Overview  
The Master of Arts program is both a self-contained program and the first stage towards doctoral studies. It has two objectives: (a) to allow the student to develop a thorough knowledge of the discipline through a program of course work in literary studies or linguistics and (b) to develop an aptitude for research. It is a twelve-month program for full-time students. The program is available on a part-time basis.

The Doctor of Philosophy program engages students in a program of study and research in French Literature/Linguistics approved by the Department.

At the beginning of their course of study, students meet individually with either the Associate Chair or Graduate Secretary in order to determine course selection with a view to ensuring that the student has a well-rounded program and, taken in conjunction with the undergraduate degree, has a broad knowledge of the discipline.

Contact and Address  
Web: www.chass.utoronto.ca/french  
E-mail: french.graduate@utoronto.ca  
Telephone: (416) 926-2307  
Fax: (416) 926-2328  

Department of French Language and Literature  
50 St. Joseph Street  
University of Toronto  
Toronto, Ontario M5S 1J4  
Canada

Degree Programs

Master of Arts

Minimum Admission Requirements  
• Students are accepted under the general regulations.  
• 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 and/or linguistics - 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 or linguistics).  
• Admission to all programs for post-graduate degrees is based upon the evidence of the supporting letters and the applicant's academic record.

Program Requirements  
• Prerequisite work, if necessary.  
• Students in both literature and linguistics are required to complete four full-course equivalents as follows:
  o Students in literature take the graduate seminar in literature (FRE 1200Y) and
    o 3.0 full-course equivalents (FCE) from the regular graduate course offerings or
    o 2.5 FCE and the 0.5 FCE Research Essay FRE 5001H, a memoire of approximately 35 pages, or
    o 2.0 FCE and the 1.0 FCE Research Essay FRE 5000Y, a 65-75 page memoire.
  o Students in linguistics take the graduate seminars in linguistics (FRE 1103H, FRE 1104H, and FRE 1125H) and
    o 2.5 FCE from the regular graduate offerings or
    o 2.0 FCE and the 0.5 FCE Research Essay FRE 5001H, a memoire of approximately 35 pages or
    o 1.5 full-course equivalents and a full-course Research Essay FRE 5000Y, a 65-75 page memoire.
  o 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 seminar in literature (FRE 1200Y) or the graduate seminars in linguistics (FRE 1103H, FRE 1104H, and FRE 1125H).
  o Up to one full-course equivalent may be taken outside the Department.
  o Normally, part-time students take the graduate seminar in literature or the graduate seminars in linguistics during the first year of their programs.
**Doctor of Philosophy**

**Minimum Admission Requirements**
- Students are accepted under the general regulations.
- Admission to the PhD program is available via one of two routes:
  - a four-year University of Toronto bachelor's degree, or its equivalent from a recognized university, that includes at least seven full-course equivalents in French language and literature/linguistics, with an average grade of at least an A- in the overall program. Admission is limited to exceptionally qualified applicants.
  - a University of Toronto master's degree in French literature or linguistics, or its equivalent 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 completed as part of the applicant's bachelor's or master's program in French literature or linguistics as appropriate. This written work should be a copy of the M.A. thesis if available.
- Applicants holding a master's degree must submit a statement of purpose (maximum 500 words) which clearly outlines the area in which the applicant intends to pursue research in French literature or linguistics.
- Applicants must satisfy the Department that they are capable of independent research in French literature or linguistics.
- Admission to all programs for post-graduate degrees is based on the evidence of the supporting letters and the applicant's academic record.

**Program Requirements**
- Course work.
  - A student admitted on the basis of a four-year bachelor's degree must complete 4 full-course equivalents during the first year of the program and 3.5 additional full-course equivalents during the second year. With the Department's permission, the student may take up to one full-course equivalent in the first year of the program, and one full-course equivalent in the second year, outside the Department. Students in literature take FRE 1200Y and FRE 1201H as part of their program; students in linguistics take FRE 1103H, FRE 1104H, FRE 1125H, and FRE 1201H as part of their program. To remain in good academic standing and to continue in the PhD program, a student must complete 3.5 full-course equivalents, with an average grade of at least an A-, by the end of the second year.
- A student admitted on the basis of a master's degree must complete 3.5 full-course equivalents during the first year of the program. With the Department's permission, the student may take one full-course equivalent outside the Department. Students in literature take FRE 1200Y, unless this course or its equivalent has already been completed, and FRE 1201H as part of their program; students in linguistics take FRE 1103H, FRE 1104H, and FRE 1125H unless already completed, and FRE 1201H as part of their program. To remain in good academic standing and to continue in the PhD program, a student must complete 3.5 full-course equivalents, with an average grade of at least an A-, by the end of the first year of the program.
- Thesis topic. By September 15 of the second year of registration, in the case of a student admitted to the PhD program on the basis of a master's degree, otherwise by September 15 of the third year of registration, a student 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.
- Language requirements. By the end of the first year of the PhD program, in the case of a student admitted on the basis of a master's degree, otherwise by the end of the second year of the PhD program, the student must demonstrate a reading knowledge of Old French or of another language (excluding French or English), as approved by the Department.
- Field examination. No later than the second session of the second year of registration in the PhD program, in the case of a student admitted on the basis of a master's degree, otherwise no later than the second session of the third year of registration, a student must pass the two parts of the field examination:
  - a written examination (to be taken by March 15) designed to test the student's knowledge of the general area in which his or her research is located, and
  - an oral examination (to be taken by April 30) based on a written thesis proposal of 15 to 20 pages, plus bibliography, designed to test the student's readiness to proceed with thesis research.
- Between the completion of the field examination components and the oral examination on the thesis, the student will meet with the supervisory committee at least once a year, and more frequently if required.
- Thesis and oral examination on the thesis.
Degree Programs

Courses
All courses are held once a week for two hours. Courses begin in the same week as do undergraduate classes.

Linguistics Courses
FRE 1103H Séminaire de linguistique I: Phonétique et phonologie
FRE 1104H Séminaire de linguistique II: Syntaxe
FRE 1125H Séminaire de linguistique III: Morphologie et sémantique
FRE 1129H Didactique du français langue seconde: quelle(s) méthode(s) pour quel(s) apprentissage(s)
FRE 1133H L’acquisition du français langue première
FRE 1140H La syllabe: études expérimentales et théoriques

Linguistic and Literature Courses
FRE 1164H Initiation à l’ancien français
FRE 1201H Méthodes de recherche (Credit/No Credit)

Literature Courses
FRE 1200Y Séminaire de littérature
FRE 1310H Le Roman de la rose et l’allégorie médiévale
FRE 1612H Satire et parole libre dans la littérature des XVIe et XVIIe siècles
FRE 1711H Le libertinage, littérature, critique, philosophie (XVIe et XVIIe siècles)
FRE 1813H Littérature de contact et pensée anthropologique en France du XVIIe au XVIIIe siècle
FRE 1901H Le récit de voyage au XIXe siècle
FRE 1903H Émile Zola: ses éditeurs et ses traducteurs
FRE 1934H Prix, concours et académies: les mécanismes de la reconnaissance littéraire
FRE 2004H Formes et voies romanesques de l’extrême contemporain
FRE 2035H Autour de l’intime en France: les écrits contemporains des femmes
FRE 2038H L’écritain impliqué, ou ce que peut la littérature aujourd’hui (figures du témoignage et de la responsabilité dans les récits actuels)
FRE 2039H Roman et critique sociale aux XXe et XXIe siècles
FRE 2040H Entre écrit et oral. Enjeux théoriques et identitaires dans les écritures francophones
FRE 2078H Altérité: formes et significations
FRE 2100H Du texte à l’image (photographies, adaptations cinématographiques, illustrations et peinture dans quelques textes contemporains)
FRE 2107H Le récit fantastique québécois: formes et transformations

Other Courses
FRE 4000Y Reading Course
FRE 4001H Reading Course
FRE 4002H Reading Course
FRE 5000Y* Research Essay
FRE 5001H* Research Essay

Cross-listed

Book History and Print Culture
BKS 1000Y Book History and Print Culture
BKS 2000H Advanced Seminar in Book History and Print Culture

Comparative Literature
COL 1255H Aspects of Structuralism

Medieval Studies
MST 3154H British History in French: Wace, Brut
MST 3155H Chrétien de Troyes, Perceval

Graduate Faculty

Full Members
Parth Bhatt - BA, MA, PhD (Chair)
Anne-Marie Brousseau - PhD
David Clandfield - BA, MA, PhD, D IIIe
Angela Cozea - BA, MA, PhD (Associate Chair & Coordinator of Graduate Studies)
Marcel Danesi - BA, MA, PhD, FRSC
Derrick De Kerckhove - BA, MA, PhD, Dip 3eme Cycle, FRSC
Charles Elkabas - BA, MA, PhD
Barbara Havercroft - BA, MA, PhD
Roland Le Huenen - L es L, DenPh, ChPA, FRSC
Julie LeBlanc - MA, PhD
Michel Lord - BA, MA, PhD
Philippe Martin - IRAL BR, D Ille C, DSCA,ChPA
Diane Massam - BA, MA, PhD
Pascal Michelucci - MA, PhD (Coordinator, Graduate Admissions & Funding)

Members Emeriti
Chantal Bertrand-Jennings - L es L, PhD
Nicole Bourgeois - DES, CAPES, D Ille C
Cécile Cloutier-Wojciechowska - L es L, DES, MA, MPh, DPS, DUP

*Courses which may continue over a program. The course is graded when completed.
Degree Programs

Alan Dainard - MA, PhD
Alexander Falconer - MA, D de L’U
Brian Fitch - BA, D de L’U, FRSC, University Professor Emeritus
Peter Fitting - MA, PhD
John Fleming - BA, MA, PhD
Catherine Grise - MA, PhD, ChPA
Lawrence Kerslake - AM, PhD
Eva Kushner - MA, PhD, FRSC
Emile Lehouck - AGR, ESS, D Phil
Pierre León - L es L, D de L’U, D es L D Hon Causa, CdrPA, FISPSc, FRSC
John Alan McClelland - MA, PhD
Brian Merrilees - MA, D de L’U, FRSC, Professor Emeritus
Peter Nesselroth - MA, PhD, ChPA
Paul Perron - BA, D de L’U, ChPA, OPA, FRSC
Jeannelle Savona - L es L, DES, CAPES, D de L’U
Ben-Zion Shek - MA, PhD, FRSC
David Smith - BA, PhD, FRSC
Robert Taylor - MA, PhD
Cameron Tolton - BA, AM, PhD
John Walker - MA, PhD
Terence Wooldridge - BA, D de L’U

Associate Members
Maroussia Ahmed - L es L, M es L, D de L’U
Julie Auger - BA, MA, PhD
Georges Berube - BA, MA, PhD
Michael Cobb - AM, BA, MA, PhD
Suzanne Crosta - BA, MA, PhD
Maria Cristina Cuervo - MA, PhD
Giuseppe Di Stefano - MA, PhD
Gillian Fenwick - BA, BEd, MA, PhD
Michael Finn - BA, MA, PhD
Jean Fiset - L es L, MA, PhD
Francis Gingras - L es L, MA, DEA, D III C
Anthony Glinoer - L es L, MA, DEA
Monica Heller - BA, MA, PhD
Gregoire Holtz - L es L, MA, DEA, D III C
Madeleine Jeay - BA, MA, PhD
Eric Jennings - BA, MA, PhD
Dorothea Kullmann - MA, PhD
Denis Liakin - BA, MA, PhD
France Martineau - BA, MA, PhD
Catherine Mavrikakis - BA, MA, PhD
Andrea Oberhuber - BA, MA, PhD
Ana Teresa Perez-Leroux - BA, MA, PhD
Guillaume Peureux - L es L, CAPES, MA, DEA, D III C
Mihaela Pirvulescu - BA, MA, PhD
Ingo Plag - MA, PhD
Keren Rice - BA, MA, PhD, Canada Research Chair
Pascal Riendeau - BA, MA, PhD
Sylvie Rosienski-Pellerin - L es L, MA, PhD
Christine Roulston - BA, MA, PhD
Francoise Rubellin - CAPES, AGR, DIle C
Rosa Sarabia - BA, MA, PhD
Joseph Schallert - BA, MA, MA, PhD
Alexandre Sevigny - BA, MA, PhD
Nina Spada - BA, MA, PhD
Dorothy Speirs - BA, MA, PhD

Carlos Teixeira - BSc, MSc, PhD
Clive Thomson - BA, MA, PhD
Sergio Villani - BA, MA, PhD

French Language and Literature  191
Degree Programs

Geography  GGR

Faculty Affiliation
Arts and Science

Degree Programs Offered
Geography, MA, MSc, PhD
Planning, MScPl, PhD
Urban Design Studies, MUDS

Collaborative Programs Offered
Degree programs that participate in:
1. Aboriginal Health, see p. 404
   • Geography, MA, MSc, PhD
2. Asia-Pacific Studies, see p. 413
   • Geography, MA, MSc
3. Community Development, see p. 428
   • Community Planning, MScPl
4. Environment and Health, see p. 439
   • Geography, MA, MSc, PhD
5. Environmental Studies, see p. 443
   • Geography, MA, MSc, PhD
   • Planning, MScPl
6. Ethnic and Pluralism Studies, see p. 445
   • Geography, MA, PhD
7. International Relations, see p. 458
   Geography, MA
8. South Asian Studies, see p. 471
   • Geography, MA, PhD
9. Women and Gender Studies, see p. 473
   • Geography, MA, MSc, PhD

Overview
The Department of Geography, which includes the program in 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.

In geography, students may undertake 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.

Contact and Address
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Department of Geography
Room S045, Sidney Smith Hall
University of Toronto
Toronto, Ontario M5S 3G3
Canada

Degree Programs

Geography

Master of Arts/Master of Science

Minimum Admission Requirements

• Appropriate four-year University of Toronto bachelor’s degree, or its equivalent from a recognized university, with a minimum B+ standing in the final two years.
• Applicants are expected to have completed at least 4.0 full-course equivalents (FCE) 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 course work.
• Students whose primary language is not English must take the Test of English as a Foreign Language (TOEFL). Minimum TOEFL scores required for admissibility:
  o Paper-based exam: 580 and 5 on the TWE
  o Computer-based exam: 237 and 5 on the essay rating component
  o Internet-based exam: 93/120 and 22/30 on each of the writing and speaking sections.

Program Requirements

• Two geography programs and various collaborative programs are available; selection is made with the approval of the department. Within most of these programs, students may receive a Master of Science degree if their research contains a substantial physical science component and if two-thirds of their course work comprises Geography courses accepted by the department as physical science courses.
• 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.
• Programs are usually completed in a 12-month period.
Degree Programs

- **Program I – Thesis:** Students undertake research leading to the preparation of a thesis, in conjunction with at least the equivalent of 1.5 graduate FCE including any required core courses.

- **Program II - Research Paper:** Students will take the equivalent of 3.0 graduate FCE and pursue a research project, normally during the summer, leading to the preparation of a research paper (GGR 1100Y).

- **Environmental Studies Research Paper (Collaborative MA/MSc Program)**
  2.5 FCE of which 1.5 FCE must be taken in the Department of Geography (including the core course), and 1.0 at the Centre for Environment (0.5 FCE must be the CFE core course). Students are also required to undergo a three-month internship and to prepare and defend a research paper (GGR 1100Y). See the Environmental Studies (Collaborative Program) entry in this calendar.

- **Environmental Studies Thesis (Collaborative MA/MSc Program)**
  2.0 FCE of which 1.0 FCE must be taken in the Department of Geography and 1.0 FCE at the Centre for Environment. Students are also required to prepare and defend a thesis.

**Doctor of Philosophy**

The PhD program prepares students for academic careers in teaching and research. Some may also pursue an advanced planning career in the public, non-profit or public sector, given the rising demand for people with a PhD credential outside of academia. Specializations include city-regions in global context; economic development and social planning; environment and sustainability planning; and urban development, design, and the built environment.

**Minimum Admission Requirements**

- **Appropriate University of Toronto master's degree, or its equivalent from a recognized university, with a minimum A- standing, In exceptional cases and at the discretion of the department, admission to the PhD program may be approved for applicants with an overall A average and appropriate University of Toronto bachelor's degree, or its equivalent from a recognized university.**

- **Students whose primary language is not English must take the Test of English as a Foreign Language (TOEFL). Minimum TOEFL scores required for admissibility:**
  - Paper-based exam: 580 and 5 on the TWE
  - Computer-based exam: 237 and 5 on the essay rating component
  - Internet-based exam: 93/120 and 22/30 on each of the writing and speaking sections.

**Program Requirements**

- The 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.

- Students must:
  - complete a minimum of 2.0 FCE and, depending on the field of specialization, up to an additional 1.0 FCE. A minimum of 0.5 FCE may be taken in other departments. (In exceptional cases, at the discretion of the department, graduate courses completed at the master’s level at the University of Toronto may be counted towards meeting some course requirements. However, all doctoral students must take a minimum of 2.0 FCE with the department after entering the PhD program. Students who enter the PhD program from a bachelor’s degree must complete 1.5 FCE in addition to the doctoral course work requirements. Applicants who hold an appropriate master’s degree but are changing disciplines or require further preparatory work, may be required to complete an additional year of graduate-level course work.)
  - submit a research statement concerning the proposed PhD topic and the scope of the PhD examination by the end of April in Year I
  - pass a PhD examination in the general field in which research is being undertaken by the end of Year I
  - upon the recommendation of their committee, be required to acquire a knowledge of a foreign language necessary for their research
  - submit a research proposal that is acceptable to their research committee by the end of the first session in Year II

- Unless otherwise specified, two years of residence are required 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.

- PhD degree program requirements are fully described in the Graduate Geography Handbook and the department's Web site www.geog.utoronto.ca

**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.

- **GGR 1100Y** Research Paper (Credit/No Credit)
- **GGR 1102H** Contemporary Issues in Geographic Thought

*Courses which may continue over a program. The course is graded when completed.
## Degree Programs

### Physical Geography
- **GGR 1202H** Sedimentation and Fluvial Geomorphology
- **GGR 1203H** Coastal Hydrodynamics, Sediment Mechanics and Morphodynamics
- **GGR 1205H** Theoretical Geomorphology
- **GGR 1206H** Sedimentary Models
- **JGE 1212H** Fate of Contaminants in the Environment
- **GGR 1214H** Global Ecology and Biogeochemical Cycles
- **GGR 1302H** Advanced Hydrology and Water Quality
- **GGR 1304H** Landscape Biogeography
- **GGR 1305H** Biogeography
- **GGR 1306H** Measurement and Modelling of Surface Environments
- **GGR 1308H** Process Hydrology
- **GGR 1310H** Climate Modelling
- **GGR 1311H** Atmosphere-Ocean Modelling
- **GGR 1314H** Topics in Physical Oceanography

### Environmental and Resource Geography
- Incoming students in Environmental and Resource Geography must take **GGR 1110H**.
- **JPG 1402H** Environment and Development
- **JPG 1403H** Political Ecology of African Environments
- **JPG 1404H** Issues in Global Warming
- **JPG 1406H** Energy Supply and Use
- **JPG 1410H** Institutional and Organizational Ecology
- **GGR 1412H** Strategies for Sustainable Development
- **JGE 1413H** Workshop in Environmental Impact Assessment
- **JPG 1414H** Cities as Ecosystems
- **JPG 1415H** Environmental Justice
- **JPG 1416H** Environmental Consequences of Land Use Change
- **JPG 1418H** Rural Land Use Planning
- **JPG 1419H** Aboriginal/Canadian Relations in Environmental and Resource Management
- **JGE 1420H** Urban Waste Management: an International Perspective
- **JPG 1421H** Health in Urban Environments
- **JPG 1508H** Planning for the Urban Poor in Developing Countries

### Historical, Social, and Cultural Geography
- Incoming students in Cultural and Historical Geography must take **GGR 1110H**.
- **JPG 1505H** The Multicultural City: Diversity, Policy and Planning
- **JPG 1506H** State/Space/Difference: Understanding the New Social Geography of the State
- **GGR 1700H** Seminar in Cultural-Historical Geography
- **JPG 1702H** Historical Urban Geography and Planning
- **JPG 1710H** Historic Preservation Planning
- **JPG 1713H** Place, Design, and Landscape
- **GGR 1714H** Cultural and Critical Geographies
- **GGR 1801H** Social Identities and Space
- **JPG 1804H** Space, Power and Geography: Understanding Spatiality
- **JPG 1805H** Transnationalism, Diaspora and Gender
- **JPG 1810H** Globalization and Postmodernism
- **JPG 1815H** Political Economy, the Body, and Health

### Geographical Information Analysis
- **GGR 1901H** Introductory Analytical Methods
- **GGR 1903H** Multivariate Statistical Methods in Geography
- **GGR 1904H** Accuracy of Spatial Databases
- **JPG 1906H** Geographic Information Systems
- **GGR 1907H** Advanced Geographic Information Systems
- **GGR 1911H** Remote Sensing
- **GGR 1913H** Digital Cartography
- **JPG 1914H** Spatial Information Systems
- **GGR 1921H** Land/Geographic Information Systems
- **GGR 1922H** Topics in Geographical Information Science

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**Urban and Economic Geography**

- Incoming students in Urban and Economic Geography must take **GGR 1110H**.
- **JPG 1501H** The Political Economy of Cities
- **GGR 1504H** Health, Place and Difference
- **JPG 1507H** Housing and Housing Policy
Degree Programs

Planning

Master of Science in Planning

Minimum Admission Requirements
- Appropriate four-year University of Toronto bachelor’s degree, or its equivalent from a recognized university, with a minimum standing in the final year of B+ in the social or life sciences, or the humanities, or the professions. Knowledge of introductory economics and statistics, as well as word processing and spreadsheet skills, is preferred prior to entry.
- Students whose primary language is not English must take the Test of English as a Foreign Language (TOEFL). Minimum TOEFL scores required for admissibility:
  - Paper-based exam: 580 and 5 on the TWE
  - Computer-based exam: 237 and 5 on the essay rating component
  - Internet-based exam: 93/120 and 22/30 on each of the writing and speaking sections.

Program Requirements
- Students normally enrol 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.
- Progress into the second year of the program is normally dependent upon the achievement of an overall B average in the first year. Equivalent provisions apply to the part-time program.
- Students are required to pursue a planning internship (PLA 4444H) between the first and second year 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.
- The program consists of 8.0 FCE, taken over 2 years. This includes the required 3.5 FCE core courses. A further 4.5 FCE (exclusive of PLA 4444H) are chosen from the list of electives and from the offerings of other departments, centres, and institutes. At least 2.5 FCE of these electives must fit into an approved specialization in one of the following 5 fields: Urban Planning and Development, Environmental Planning, Social Planning and Policy, Economic Planning and Policy, Urban Design.
- The requirements for the degree must be completed within six years of first registration in the program.

Doctor of Philosophy

Minimum Admission Requirements
- Appropriate University of Toronto master’s degree in planning or a related field, or its equivalent from a recognized university, with a minimum A- average and demonstrated competence in analytical methods or successful completion of one of two methods courses in the current master’s program.
- Students whose primary language is not English must take the Test of English as a Foreign Language (TOEFL). Minimum TOEFL scores required for admissibility:
  - Paper-based exam: 580 and 5 on the TWE
  - Computer-based exam: 237 and 5 on the essay rating component
  - Internet-based exam: 93/120 and 22/30 on each of the writing and speaking sections.

Program Requirements
- Successful completion of coursework, a comprehensive examination, a thesis proposal, and a thesis.
- Students with a master's degree in planning comparable to the University of Toronto M.Sc. in Planning are required to take 3.0 full-course-equivalents (FCE) of which 1.5 FCE are core courses and 1.5 FCE are 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.
- Normally the PhD program is completed within four years.
- Visit the Planning Web site www.geog.utoronto.ca for more details.

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 MScPl
PLA 1101H Issues in Planning History, Thought, and Practice
PLA 1102H Urban and Regional Dynamics
PLA 1103H Legal Basis of Planning
PLA 1105H Planning Decision Methods
PLA 1106H Workshop in Planning Practice
PLA 1107Y Current Issues Paper

Core Courses for PhD Planning
JPG 1111H Advanced Research Design
PLA 2000H Advanced Planning Theory
PLA 2001H Planning Colloquium (CR/NCR)

Elective Courses
PLA 1149H Independent Study
PLA 1150H Planning Field Trip Course
JPG 1402H Environment and Development
JPG 1404H Issues in Global Warming
JPG 1406H Energy Supply and Use
JGE 1413H Workshop in Environmental Impact Assessment
JPG 1414H Cities as Ecosystems
JPG 1416H Environmental Consequences of Land Use Change
JPG 1418H Rural Land Use Planning
Degree Programs

JPG 1419H Aboriginal/Canadian Relations in Environmental and Resource Management
JGE 1420H Urban Waste Management: an International Perspective
JPG 1421H Health in Urban Environments
JPG 1422H The Multicultural City: Diversity, Policy and Planning
JPG 1423H Urban and Regional Social Policy: An International Perspective
JPG 1424H Housing and Housing Policy
JPG 1425H Planning for the Urban Poor in Developing Countries
JPG 1426H Feminism, Postcoloniality and Development
JPG 1427H Place, Politics and the Urban
JPG 1428H The Role of the Planner: Making a Difference
PLA 1501H The Political Economy of Cities
PLA 1502H Planning and Social Policy
PLA 1503H Planning and Social Policy
PLA 1504H The Multicultural City: Diversity, Policy and Planning
PLA 1505H The Multicultural City: Diversity, Policy and Planning
PLA 1506H Urban and Regional Social Policy: An International Perspective
PLA 1507H Housing and Housing Policy
PLA 1508H Planning for the Urban Poor in Developing Countries
PLA 1509H Feminism, Postcoloniality and Development
PLA 1510H Recent Debates on Urban Form
PLA 1511H Place, Politics and the Urban
PLA 1512H The Role of the Planner: Making a Difference
PLA 1513H Policy Analysis
PLA 1514H City Planning and Management
PLA 1515H Urban Transportation Policy Analysis
PLA 1516H Environmental Planning and Policy
PLA 1517H Cities, Industry and the Environment
PLA 1518H Regional Development and Policy
PLA 1519H Planning the Social Economy
PLA 1520H Urban Design: History Theory Criticism
PLA 1521H Planning and Real Estate Development
PLA 1522H Introductory Studio in Urban Design and Planning
PLA 1523H Advanced Studio in Urban Design and Planning
PLA 1524H Urban Design Research Methods
PLA 1525H Urban Design and Development
PLA 1526H Regional Economic Analysis
PLA 1527H Historical Urban Geography and Planning
PLA 1528H Historic Preservation Planning
PLA 1529H Place, Design, and Landscape
PLA 1530H Public Finance for Planners
PLA 1531H Space, Power and Geography: Understanding Spatiality
PLA 1532H Globalization and Postmodernism
PLA 1533H Law and Planning
PLA 1534H Geographic Information Systems
PLA 1535H Social Survey Methods
PLA 1536H Spatial Information Systems
PLA 4444H Internship (Credit/No Credit) (Designates the internship to be undertaken by master’s students in the Planning Program. It cannot be used to fulfill other course requirements for the degree.)

Urban Design Studies

The MUDS is a one-year professional degree program which provides intensive, advanced education in the principles and practices of urban design. It aims to encourage an understanding of the interdependence of the economic, social, and political forces that shape the character, physical structure, and dynamic properties of cities. The MUDS program coincided with the launch of the Master of Urban Design (MUD) degree program in the Faculty of Architecture, Landscape and Design. Consult the separate calendar entry under Architecture, Landscape, and Design for more details.

Master of Urban Design Studies

Minimum Admission Requirements

• Applicants with prior degrees in a range of disciplines including planning, geography, other social sciences, the design disciplines, business administration, and law are encouraged to apply. Students are admitted via one of three routes:
  • Master’s degree in a professional field such as planning, architecture, landscape architecture, business administration and law, an average of at least B+ in graduate studies is required.
  • Bachelor’s degree (four or five year) in planning, architecture, or landscape architecture, with a strong design orientation; an average of at least B+ (or upper second class) in the final year is required.
  • Bachelor’s degree (four or five year) in any discipline plus evidence of significant professional experience (normally at least five years) in an area related to Urban Design and Planning are required to have attained at least a B+ average in their final year.

• Students whose primary language is not English must take the Test of English as a Foreign Language (TOEFL). Minimum TOEFL scores required for admissibility:
  • Paper-based exam: 580 and 5 on the TWE
  • Computer-based exam: 237 and 5 on the essay rating component
  • Internet-based exam: 93/120 and 22/30 on each of the writing and speaking sections.

Program Requirements

• 4.0 full-course-equivalents (FCE). Students entering with significant prior design workshop/studio experience (as determined by the admissions committee) must complete a core program of 2.5 FCE plus a further 1.5 FCE chosen from electives given within the Program in Planning; the Faculty of Architecture, Landscape and Design; and from the offerings of other graduate units. Students without significant prior design workshop/studio experience must complete the above core program and PLA 1652H, plus a further 1.0 elective FCE.
Degree Programs

- Degree requirements will normally be completed within one academic year and must be completed within four years of first registration in the program.
- The MUDS program may be taken on a part-time basis. The maximum time for completion of the degree requirements is four years from first registration in the program. Part-time students are expected to participate in the same class meetings as full-time students.

Courses

Core Courses

The core program is composed of five half-course equivalents (six half-course equivalents for those entering the program without significant prior design workshop/studio experience) that encompass the practical, theoretical, and methodological aspects of urban design.

Course sequence for the core program:

First Session
PLA 1650H/URD 1031H Urban Design: History Theory Criticism
or
JPG 1713H Place, Design and Landscape

PLA 1654H Urban Design Research Methods
PLA 1652H Introductory Studio in Urban Design and Planning (students without significant design workshop/studio experience must take PLA 1652H)

Plus one half-course elective, or two half-course electives if the student is exempted from PLA 1652H

Second Session
PLA 1653Y Advanced Workshop in Urban Design
PLA 1655H Urban Design and Development

Plus one half-course elective

Electives

Elective courses may be chosen from the following:

PLA 1554H Transportation and Urban Form
PLA 1651H Planning and Real Estate Development
JPG 1501H The Political Economy of Cities
JPG 1510H Recent Debates on Urban Form
JPG 1512H Place, Politics and the Urban
JPG 1702H Historical Urban Geography and Planning
JPG 1710H Historic Preservation Planning
JPG 1713H Place, Design and Landscape
JPG 1804H Space, Power and Geography: Understanding Spatiality
JPG 1914H Spatial Information Systems
URD 1012H Urban Design Studio Options
URD 1021H Urban Design Computation
URD 1032H Urban Design in the History of the Post-Industrial World
URD 1033H The City and the Text

MUDS students may also select other electives, subject to the approval of the Director, Program in Planning, and the Coordinator of the MUDS program. Courses with a URD designation are offered through the Faculty of Architecture, Landscape and Design.

Graduate Faculty

Full Members
Carl Amrhein - BSc, PhD, MCIP
George Arhonditsis - BSc, MSc, PhD
Nathan Basiliko, PhD
Alana Boland - BA, MAIS, PhD
Brian Branfireun - HBA, MSc, PhD
Ronald Buliung, PhD
Michael Bunce - BA, PhD
Jing Chen - BSc, PhD, FRSC
Tenley Conway - BSc, MA, PhD
Deborah Cowen, BA, MS, PhD
Sharon Cowling - BSc, MSc, PhD
Amrita Daniere - AB, MPP, PhD, MCIP (Graduate Chair)
Anthony Davis - BA, MA, PhD
Joseph Desloges - BES, MSc, PhD
Pierre Desrochers - BSc, MA, PhD
Miriam Diamond - MSc, PhD
Richard DiFrancesco - MA, PhD, MCIP
James Dunn - BA, MA, PhD
Matthew Farish, BA, PHD
Sarah Finkelstein, AB, MPH, PHD
Meric Gertler - BA, MCP, PhD, FRSC, MCIP, Goldring Chair in Canadian Studies (UC), Vice-Dean Graduate Research
Emily Gilbert - BA, MA, PhD
Kanishka Goonewardena - BSc, MPl, PhD
William Gough - BSc, MSc, PhD (Graduate Coordinator)
Jason Hackworth - BA, MA, MEP, PhD
Leslie Harvey - BSc, MSc, PhD
Paul Hess - BA, MUP, PhD
J. David Hulchanski - BA, MSc, MCIP, Chow Yei Ching Social Work Chair in Housing
Mark Hunter, BA, MSS, PhD
Thembela Kepe, MS, PhD
Deborah Leslie - BA, MA, PhD
Robert Levit - BA, MArch
Robert Lewis - BA, MA, PhD
Ken MacDonald - BA, MA, PhD
Deborah McGregor, BSc, MES, PhD
Virginia Maclaren - BA, MRP, MSc, PhD, MCIP
Minelle Mahtani - BA, PhD
Jay Malcolm - BSc, MSc, PhD
Eric Miller - BASc, MAsSc, PhD, Bahen/Tanenbaum Professor
John Miron - BA, MA, MSc, PhD
D. Scott Munro - BSc, MSc, PhD
Anthony Price - BSc, MSc, PhD
Scott Prudham - BArtSc, MA, PhD
Katharine Rankin - BA, MRP, PhD (Director, Program in Planning)
Edward Relph - BA, MPh, PhD
Vincent Robinson - MS, PhD
Susan Ruddick - BES, MA, PhD, MCIP
Rachel Silvey - BA, MA, PhD

Graduate Faculty
Degree Programs

Myrna Simpson - BSc, PhD
Andre Sorensen - BA, MS, PhD
Sarah Wakefield - BA, MA, PhD
Alan Walks - BA, MA, PHD
Mathew Wells - BSc, PhD
Rodney White - BA, MSc, PhD
Kathleen Wilson - BA, MA, PhD

**Members Emeriti**
Larry Bourne - BA, MA, PhD, FRSC, MCIP, Hon Causa
John Britton - BA, MA, PhD
William Dean - MA, PhD
Gunter Gad - DrPhil, PhD
John Galloway - BA, MA, PhD
Reiner Jaakson - BA, MSc, PhD, MCIP
P Donald Kerr - MA, PhD
James Lemon - MS, PhD
William Michelson - AB, AM, PhD, FRSC
Shoukry Roweis - MSc, PhD
James Simmons - MA, PhD
Joseph Whitney - PhD, MCIP

**Associate Members**
Donald Boyes - BSc, MSc, PhD
Shauna Brail
Dave Etkin - BSc, BEd, MSc
Maryann Feldman - BA, MS, PhD
Angelo Grima - BA, MA, PhD
Sonia Labatt - BA, MA, PhD
Carl Mitchell
Barbara Murox - BA, PhD
Blake Poland - BA, MA, PhD
Beth Savan - BSc, PhD, MCIP
Harvey Shear - PhD
Robert Wright - BScRec, MLA
Degree Programs

Geology GLG

Faculty Affiliation
Arts and Science

Degree Programs Offered
Geology – MASc, MSc, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Environmental Studies, see p. 443
   - Geology, MSc, PhD
2. Geology and Physics, see p. 459
   - Geology, MSc, PhD

Overview
The Department of Geology accepts students for advanced degrees – Master of Applied Science, Master of Science, and Doctor of Philosophy - 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 Civil Engineering, Ecology and Evolutionary Biology, Centre for Environment, Physics, Chemistry, and Materials Science and Engineering.

In recent years, research by staff and graduate students has been carried out in all parts of North America and other parts of the world, both on land and at sea. In addition to field-based studies, the Department has a wide range of modern laboratories; advanced studies are encouraged in a broad spectrum of geological problems. Further details of research emphases, facilities, detailed degree requirements, and graduate courses are available on the departmental Web site www.geology.utoronto.ca.

Contact and Address
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Telephone: (416) 978-1240
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Department of Geology
Earth Sciences Centre
Room 1066, 22 Russell Street
University of Toronto
Toronto, Ontario M5S 3B1
Canada

Degree Programs

Master of Applied Science

Minimum Admission Requirements
- Students are accepted under the general regulations.
- 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.

Program Requirements
- Normally complete the graduate seminar (GLG 1101H), one of the 6 breadth courses, and 1.0 FCE of elective courses, for a total of 2.0 FCE.
- A research thesis.
- Minimum full-time residence is one academic session.

Master of Science

Minimum Admission Requirements
- Students are accepted under the general regulations.
- 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.

Program Requirements
- Students in the all coursework option are normally required to complete the graduate seminar (GLG 1101H), the all-course research project (GLG 3608H), one of the 6 breadth courses, and 3.5 FCE of elective courses for a total of 5.0 graduate full-course equivalents (FCE).
- Students in the doctoral-stream option are normally required to complete the graduate seminar (GLG 1101H), the research project (GLG 3603Y), research presentation (GLG 3601Y), one of the 6 breadth courses, and 1.0 FCE of elective courses, for a total of 4.0 FCE.
- To encourage breadth, the Department will permit students to substitute electives with equivalent non-geology courses.
- Students may proceed on a part-time basis.

Doctor of Philosophy

Minimum Admission Requirements
- Students are accepted under the general regulations.
- 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.

Program Requirements
- Preparation of a research thesis constituting a significant contribution to the knowledge of the earth.
- Students normally complete the graduate seminar course, one of the 6 breadth courses and an additional half-course, for a total of 1.5 FCE. The additional half-course may be taken in departments.
other than Geology with the approval of the student's advisory committee. A reduction in the number of required courses may be granted for students who have previously undertaken graduate studies in the appropriate fields. Recommendations must be made by a student's advisory committee for consideration and approval by the Department's Graduate Affairs Committee.

- Students who begin the PhD program directly from the Department's research-based MSc are required to take one of the six breadth courses and an additional half-course. 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.
- 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 departmental Web site).

### Courses

Check with the Department for current year's offerings.

- GLG 1100Y Seminars in Geology Y
- GLG 1101H Graduate Seminars in Geology
- GLG 1423H Mineralogy
- GLG 1430H Basin Analysis
- GLG 1436H Paleoecological Assessment of Environmental Change
- GLG 1440H Petrology
- GLG 1441H Remote Sensing of Earth and the Terrestrial Planets
- GLG 1442H Introductory Mineral Deposits I
- GLG 1443H Introductory Mineral Deposits II
- GLG 1450H Contaminant Fate and Transport in Subsurface Environments
- GLG 1465H Geodynamics
- GLG 2222H Tectonics and Planetary Dynamics
- GLG 2302H Mineral Resources
- GLG 2303H Earth Systems Evolution
- GLG 2304H Geochemistry
- GLG 2608H Advanced Glacial Sedimentology
- GLG 2704H Isotope Geochemistry
- GLG 2708H Characterization of Geological Materials
- GLG 3601Y Research Presentation
- GLG 3602H Seminars in Geology
- GLG 3603Y Research Project
- GLG 3604H Selected Topics in Geology
- GLG 3605H Selected Topics in Geochemistry
- GLG 3606H Selected Topics Earth System Evolution
- GLG 3607H Selected Topics in Geodynamics
- GLG 3608H All-Course Research Project
- JGN 2607H Advanced Techniques in Hydrogeology

Additional related courses can be found in the Geophysics section of the Graduate Department of Physics course listings.

### Graduate Faculty

#### Full Members

- Richard Bailey - BSc, PhD (Chair)
- Bridget Bergquist - BS, PhD
- Jorg Bollmann - Dip Geol Sci Nat
- James Brenan - BSc, PhD
- Jean-Bernard Caron - PhD
- Sharon Cowling - BSc, MSc, PhD
- Alexander Cruden - BSc, PhD, McRae Quantec Chair in Geoscience
- Donald Davis - BSc, MSc, PhD
- Nicholas Eyles - BSc, MSc, PhD, PGeo
- Grant Ferris - BSc, PhD
- Rebecca Ghent - BA, MSc, PhD
- Michael Gorton - BSc, PhD
- Henry Halls - BSc, MSc, PhD
- Michael Hamilton - BSc, PhD
- Martin Head - BSc, PhD
- Grant Henderson - BSc, MSc, PhD
- Kenneth Howard - BSc, MSc, PhD, PGeo, CGeol FGS, PHG
- Julian Lowman - BSc, MSc, PhD
- Andrew Miall - BSc, PhD, DSc, Hon Causa, FRSC
- James Mungall - BSc, MSc, PhD
- Russell Pysklywec - BSc, PhD (Coordinator of Graduate Studies)
- Daniel Schulze - BA, MSc, PhD
- Barbara Sherwood Lollar - BA, MSc, PhD
- Myrna Simpson - BSc, PhD
- Edward Spooner - BA, PhD
- Gopalan Srinivasan - BSc, MSc, PhD
- Kimberly Tait - BSc, MSc, PhD
- Mathew Wells - BSc, PhD
- Frederick Wicks - BSc, PhD
- Ulrich Wortmann - Dip Geol, Dr Rer Nat
- R. Paul Young - BSc, MSc, Post-grad Cert Ed, PhD, CGeol, CEng, Keck Chair of Engineering Seismology and Rock

#### Members Emeriti

- Gregor Anderson - BEng, MSc, PhD
- Thomas Krogh - MSc, PhD
- Anthony Naldrett - BA, MSc, PhD, FRSC, University
- Professor Emeritus, Emeritus Dr. Norman B Keevil Chair in Ore
- Geoffrey Norris - BA, MA, PhD, FRSC
- Pierre-Yves F Robin - BSc, MSc, PhD
- John Rucklidge - BA, PhD
- Walfried Schwerdtner - Dr Rer Nat, Dip Geol, BSc, PhD
- Steven Scott - BSc, MSc, PhD, Hon Causa, FRSC, Dr. Norman B Keevil Chair in Ore Genesis
- Peter Von Bitter - BA, MA, PhD
- John Westgate - BSc, PhD

#### Associate Members

- Samuel Bowring - BS, MS, PhD
- David Rudkin - BSc
Degree Programs

Germanic Languages and Literatures

Faculty Affiliation
Arts and Science

Degree Programs Offered
German Literature, Culture and Theory – MA, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Jewish Studies, see p. 460
   • Germanic Languages and Literatures, PhD
2. Women and Gender Studies, see p. 473
   • Germanic Languages and Literatures, MSc, PhD

Overview
The Department of Germanic Languages and Literatures at the University of Toronto is the oldest and largest department of German in Canada. The Department's emphasis and traditional strength is in the history of literature and in intellectual history. Further areas of interest are German and Germanic philology and linguistics, theory of literature, German cinemas, and the interdisciplinary study of German culture and society.

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: www.chass.utoronto.ca/german
E-mail: german@chass.utoronto.ca
Telephone: (416) 926-2321
Fax: (416) 926-2329

Department of Germanic Languages and Literatures
3rd Floor, 50 St. Joseph Street
University of Toronto
Toronto, Ontario M5S 1J4
Canada

Degree Programs

Master of Arts

Minimum Admission Requirements
- Applicants are accepted under the general regulations and must satisfy the Department's program requirements stated below.
- Applicants to the one-year MA program must have completed the four-year BA of this University with major or specialist standing in German (a minimum of seven courses past O.A.C., at least four of which are at the senior level) with no less than a B+ average, or give evidence of similar qualifications.
- Applicants from other universities should arrange for three supporting letters to be sent to the Coordinator of Graduate Studies of the Department, preferably on forms available from the Department.
- Admission is based upon the applicant's academic record and upon the evidence of the supporting letters.

Program Requirements

Doctor of Philosophy

Minimum Admission Requirements
- Applicants are accepted under the general regulations and must satisfy the Department's program requirements stated below.
- Admission to the PhD program requires either
  o a four-year University of Toronto bachelor’s degree, or its equivalent from a recognized university, that includes at least 6.0 full-course equivalents (FCE) in German language, literature, and culture, 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 German courses, or
  o a University of Toronto master's degree in German, or its equivalent 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 German at an advanced level.
- Applicants from other universities should arrange for three supporting letters to be sent to the Coordinator of Graduate Studies of the Department, preferably on forms available from the Department.
- Admission is based upon the applicant's academic record and upon the evidence of the supporting letters.

Program Requirements
- Applicants admitted on the basis of a four-year bachelor's degree must take a minimum of 7.0 full-course equivalents (FCE) including COL 1000H with an average grade of at least an A-. The Department may recommend to the School the termination of the registration and eligibility of a student who fails to complete at least 3.5 FCE, with an average of at least an A- during the first year of the program. The student is required to complete the remaining
Degree Programs

courses required for the degree, with an A- average by the end of the second year.

- Applicants admitted on the basis of a master's degree must take a minimum of 4.0 FCE including COL 1000H with an average grade of at least an A-.
- The student is required to complete at least 3.5 FCE by the end of the first year of registration and any remaining courses required for the degree by the end of the second year.

- Course selection may include 1.5 FCE in a department other than Germanic Languages and Literatures.
- Course selection is made in consultation with the Coordinator of Graduate Studies of the Department and must be approved by the Department.
- Students must give evidence of reading knowledge of French, or, in exceptional circumstances, of another language approved by the Department.
- Pass a general examination in German literature.
- Pass a thesis field review.
- Make an oral presentation of their thesis.
- Submit a thesis on an approved subject and pass an oral examination on this subject.
- 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's conditions (see Degree Regulations, Doctor of Philosophy, Thesis).

Courses

Courses are not all courses are offered every year. The Department should be consulted each session as to actual course offerings.

GER 1200H Middle High German
GER 1300H Cultural History of the German Language
GER 1470H Goethe in Context
GER 1490H Bildung und der Roman der Spätaufklärung
GER 1501H Romanticism
GER 1510H E.T.A. Hoffmann and the Dialectic of Enlightenment
GER 1530H Heine and Critical Theory
GER 1580H Vienna at the Turn of the Century
GER 1615H The Early Theatre of Bertolt Brecht
GER 1661H Modernism in Context
GER 1690H Theatre in the Weimar Republic
GER 1710H Weimar Cinema
GER 1720H Kafka with Deleuze: Toward a "Minor Literature"
GER 1730H Travel Writing
GER 1752H Germany's Colonial Imaginary
GER 1770H Reviewing the 50s: German Cinemas under Reconstruction
GER 1771H Topics in German Cinema Studies
GER 1772H The Politics of the Non-Fiction Film
GER 1775H Cinemas of Migration
GER 1780H Topics in German Visual Culture
GER 1820H The Learning and Teaching of German
GER 1830H Topics in German Intellectual History
GER 1860H Introduction to Critical Theory
GER 2000H,Y Reading Course in Approved Field
GER 3000H Current Trends in German Literature
JGC 1660H Modernism and the Other
JGC 1750H Modernity and Its Discontents
MST 2010Y Old Norse
MST 2015Y Studies in Old Norse Texts
MST 2019H Icelandic Family Sagas

Graduate Faculty

Full Members
Angelica Fenner - BA, MA, PhD
Willi Goetschel - LicPhil, PhD
Michael Hager - BA, MA, Phd
John Noyes - BA, MA, PhD
Stefan Soldovieri - BA, MA, PhD (Coordinator of Graduate Studies)
Markus Stock - MA PhD
John Zilcosky – PhD (Chair)

Members Emeriti
Augustinus Dierick - BA, MA, PhD
Charles Genno - PhD
Wolfgang Hempel - DPhil
Hartwig Mayer - DPhil
Christa Saas - BA, MA, PhD
Helfried Seliger - PhD
Heinz Wetzel - DPhil

Associate Members
James Retallack - BA, DPhil
Anna Shternshis - BA, MA, PhD

202 Germanic Languages and Literatures
Degree Programs

Health Policy, Management and Evaluation  

Faculty Affiliation
Medicine

Degree Programs Offered
Health Administration – MSc, PhD
Field: Clinical Epidemiology and Health Care Research – MSc, PhD
Field: Health Services Research – MSc, PhD
Field: Health Technology Assessment and Management - MSc

Health Administration – MHSc, Combined MHSc/MN, Combined MHSc/MSW

Health Informatics – MHI (pending approval)

Management of Innovation – MMI

Collaborative Programs Offered
Degree programs that participate in:

1. Aging, Palliative and Supportive Care Across the Life Course, see p. 408
   • Health Administration, MHSc, MSc, PhD
2. Bioethics, see p. 416
   • Health Administration, MHSc, MSc, PhD
3. Cardiovascular Science, see p. 426
   • Health Administration, MHSc, MSc, PhD
4. Health Care, Technology and Place, see p. 454
   • Health Administration, PhD
5. Health Services and Policy Research, see p. 456
   • Health Administration, MSc, PhD
6. International Relations, see p. 458
   • Health Administration, MSc
7. Women and Gender Studies, see p. 473
   • Health Administration, MHSc, MSc, PhD
8. Women’s Health, see p. 478
   • Health Administration, MSc, PhD

Overview
The Department of Health Policy, Management and Evaluation (HPME) is training Canada’s future health leaders and researchers through its outstanding degree programs:
1. Master of Health Informatics (pending approval)
2. Master of Management of Innovation
3. Master of Health Science in Health Administration
4. Master of Science in Health Administration
5. Doctor of Philosophy in Health Administration

HPME also offers two combined programs which allow students to complete two degrees in less than 2 years. It takes to complete the programs separately.
1. Combined Master of Health Science/Master of Nursing Program in Health Administration and Nursing Science
2. Combined Master of Health Science/Master of Social Work Program in Health Administration and Social Work.

Multi-disciplinary collaborative programs with other University of Toronto graduate departments allow further specialization.

A complete description of all HPME programs is available on the Web site www.hpme.utoronto.ca where application forms are also available. Please note the application deadlines.

November 15
MSc in Health Administration – field: Clinical Epidemiology and Health Care Research
MSc in Health Administration – field: Health Services Research
PhD in Health Administration – field: Clinical Epidemiology and Health Care Research
PhD in Health Administration – field: Health Services Research

February 1
MHSc in Health Administration
MHSc in Health Administration/MSW Combined Degree Program
MHSc in Health Administration/MN Combined Degree Program
MSc in Health Administration – field: Health Technology Assessment and Management

March 1
MMI

Contact and Address
Health Administration
Web: www.hpme.utoronto.ca
E-mail: dept.hpme@utoronto.ca
Telephone: (416) 978-4326
Fax: (416) 978-7350

Department of Health Policy, Management and Evaluation
Faculty of Medicine
University of Toronto
Fourth Floor, 155 College Street
Toronto, Ontario M5T 3M6
Canada

Management of Innovation
Web: www.utm.utoronto.ca/management/mmi
E-mail: mmi.utm@utoronto.ca
Telephone: (905) 569-4743
Fax: (905) 569-4397

Master of Management of Innovation
Kaneff Centre, Room 207
University of Toronto at Mississauga
3359 Mississauga Road North
Mississauga, Ontario L5L 1C6
Canada
Degree Programs

Health Administration

Master of Science
The Health Administration Graduate Program offers three fields leading to the Master of Science. These include: Clinical Epidemiology and Health Care Research; Health Services Research; and Health Technology Assessment and Management.

Minimum Admission Requirements
- Students normally require an overall B+ average or higher in the last two years of a four year undergraduate degree from a recognized university (for applicants to the Clinical Epidemiology and Health Care Research, a degree in a health profession (e.g. MD, BScN, BScOT, BScPT, DDM, MScN) from a recognized university with a B+ average in the final two years is required).

Program Requirements
Field - Clinical Epidemiology and Health Care Research
- Two options are available:
  - Thesis option comprising 3.0 full-course equivalents (FCE) and a thesis.
  - Course work only option comprising 5.0 FCE including completion of at least one research practicum

Thesis MSc
- Completion of 3.0 full-course equivalents (FCE) as follows:
  - 1.5 required FCE: HAD 5301H, HAD 5307H and one of HAD 5303H, HAD 5304H, HAD 5306H or HAD 5309H
  - 1.5 optional FCE
- A thesis written under the supervision of a thesis committee and its defence before an examination committee.
- Completion of all degree requirements within five years.

Course work-only MSc
- Completion of 5.0 FCE as follows:
  - 2.0 required FCE: HAD 5301H, HAD 5307H, HAD 6360H, and one of HAD 5303H, HAD 5304H or HAD 5309H
  - 3.0 optional FCE
- Completion of all degree requirements within five years.

Field - Health Services Research
- 3.0 full-course equivalents; of which 1.0 FCE must be research methodology courses and 1.0 FCE must be in an area of specialization.

- A thesis written under the supervision of a thesis committee and its defence before an examination committee.
- Completion of all degree requirements within five years.

Field - Health Technology Assessment and Management
- 3.0 full-course equivalents (HAD5308H, HAD5730H, HAD 5760H, HAD 5763H, HAD5727H and HAD5304H) and participate in two non-credit seminars. The courses in this field are offered in a modular fashion in Canada and Europe.
- A thesis written under the supervision of a thesis committee and its defence before an examination committee.
- Completion of all degree requirements within five years.

MSc Courses
HAD 5011H Canada’s Health Care System
HAD 5301H Introduction to Clinical Epidemiology and Health Care Research
HAD 5302H Measurement in Clinical Research
HAD 5303H Controlled Clinical Trials
HAD 5304H Clinical Decision Making and Cost Effectiveness
HAD 5305H Evidence-Based Guidelines
HAD 5306H Introduction to Health Care Research Methodology
HAD 5307H Introduction to Applied Biostatistics
HAD 5308H Evidence Synthesis: Systemic Reviews and Meta-Analysis
HAD 5309H Non-Experimental Design for the Clinical Researcher
HAD 5310H Pragmatic Issues in Conduct of Controlled Trials
HAD 5312H Decision Modelling of Clinical Policy and Economic Evaluation
HAD 5313H Advanced Design and Analysis Issues in Clinical Trials
HAD 6360H Required Research Practicum in Clinical Epidemiology (Credit/No Credit)
HAD 6361H Optional Research Practicum in Clinical Epidemiology (Credit/No Credit)
HAD 7002H Reading Course
JNH 5000H Measurement of Patients’ Preferences in Health Care Decision Making
MSC1060H Biostatistics for Health Sciences
Health Administration

Doctor of Philosophy

Minimum Admission Requirements
• A master's degree (MA or MSc) requiring a thesis. For applicants interested in Clinical Epidemiology and Health Care Research a master's degree in a health profession with a B+ average or higher in the last two years of study is required.
• 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 HPME committee, if the applicant has the appropriate background preparation and research experience or publications which can be considered equivalent to a master's thesis. Students with a non-thesis master's degree and little or no research experience may be admitted to the MSc program and may petition to transfer into the PhD program within 24 months of first registration. Transfer is contingent upon successful completion of master's course work and preparation and defence of a PhD thesis proposal.
• Some applicants may be admitted to a flexible-time PhD option with the approval of the graduate chair. The flexible-time PhD option benefits mature students with career and/or familial obligations.

Program Requirements
Full Time
• Completion of a comprehensive course in the area of specialization.
• Completion of 5.0 full-course equivalents (FCE) from those listed below. Students enrolled in the Clinical Epidemiology and Health Care Research Field must select: 2.0 FCE compulsory courses and 2.0 recommended FCE from the Clinical Epidemiology and Health Care Research Courses listed below.
• Writing of a PhD thesis under the supervision of an approved thesis committee,
• Oral defence of the thesis before an examination committee,
• Full time registration (fall, spring, summer sessions) for the first four years of the doctoral program.
• Completion of all degree requirements within six years from first registration in the program.

Flexible Time Option
• Completion of a comprehensive course in the area of specialization.
• Completion of 10 half-courses.
• Writing of a PhD thesis under the supervision of an approved thesis committee,
• Oral defence of the thesis before an examination committee,
• Full time registration (fall, spring, summer sessions) for the first four years of the doctoral program; thereafter, students may register part time.
• Completion of all degree requirements within eight years from first registration in the program.

Courses

Field – Clinical Epidemiology and Health Care Research

Compulsory courses
HAD 5301H Introduction to Clinical Epidemiology and Health Care Research
HAD 5307H Introduction to Applied Biostatistics
HAD 5311H Comprehensive/Synthesis (one year)
MSC1060H Biostatistics for Health Sciences

Recommended courses (one course from each of the four groups)

Group 1
HAD 5302H Measurement in Clinical Research
HAD 5310H Pragmatic Issues in Conduct of Controlled Trials

Group 2
HAD 5303H Controlled Clinical Trials
HAD 5310H Pragmatic Issues in Conduct of Controlled Trials

Group 3
HAD 5304H Clinical Decision Making and Cost Effectiveness
HAD 5730H Economic Evaluation Methods for Health Service Research
HAD 5760H Advanced Health Economics and Policy Analysis
JNH 5000H Measurement of Patients' Preferences in Health Care Decision Making

Group 4
HAD 5305H Evidence-Based Guidelines
HAD 5309H Non-Experimental Design for the Clinical Researcher

Elective Courses
HAD 5011H Canada's Health Care System (Doctoral Stream)
HAD 5302H Measurement in Clinical Research
HAD 5303H Controlled Clinical Trials
HAD 5304H Clinical Decision Making and Cost Effectiveness
HAD 5305H Evidence-Based Guidelines
HAD 5306H Introduction to Health Care Research Methodology
HAD 5308H Systematic Review of Randomized Controlled Trials

*Courses which may continue over a program. The course is graded when completed.
Degree Programs

HAD 5309H Non-Experimental Design for the Clinical Researcher
HAD 5310H Pragmatic Issues in Conduct of Controlled Trials
HAD 5312H Decision Modelling of Clinical Policy and Economic Evaluation
HAD 5313H Advanced Design and Analysis Issues in Clinical Trials
HAD 6360H Required Research Practicum in Clinical Epidemiology (Credit/No Credit)
HAD 6361H Optional Research Practicum in Clinical Epidemiology (Credit/No Credit)
HAD 7002H Applied Bayesian Methods
JNH 5000H Measurement of Patients' Preferences in Health Care Decision Making

Cross-listed Courses
These courses are limited to certain program students in Health Policy, Management and Evaluation. Please check the Web site www.hpme.utoronto.ca.

BME 1456H Changing Health Care Technologies, People, and Places
HSR 1000H Health Services Research Practicum
HSR 1001H Introduction to Qualitative Methods for Health Services and Policy Research
HSR 1002H Health Services and Policy Research Summer Institute
JCV 3060H Advanced Topics in Cardiovascular Sciences—Molecular Biology and Heart Signal Transduction
JCV 3061H Advanced Topics in Cardiovascular Sciences—Hormones
JCV 3062H Advanced Topics in Cardiovascular Sciences—Heart Function
JCV 3063H Advanced Topics in Cardiovascular Sciences—Vascular
JHM 1000H Issue Analysis in Interdisciplinary, International Health Research
LAW 465H Conflicts of Interest in Medicine: Evidence, Public Policy, and the Law
LAW 404H Health System Law and Policy

Field – Health Services Research
HAD 5011H Canada’s Health Care System (Doctoral Stream)
HAD 5726H Design and Evaluation in eHealth Innovation and Information
HAD 5727H Knowledge Transfer and Exchange
HAD 5728H Performance Measurement in Health Care: Theory and Application
HAD 5729H Theoretical, Conceptual and Methodological Issues in Knowledge Translation
HAD 5730H Economic Evaluation Methods for Health Service Research
HAD 5734H Organizational Learning and Knowledge Transfer
HAD 5760H Advanced Health Economics and Policy Analysis
HAD 5763H Health Care Performance Measurement
HAD 5768H International Perspectives on Health Services Management
HAD 5771H Resource Allocation Ethics
HAD 5772H Intermediate Statistics for Health Services Researchers
HAD 5773H Introduction to Theories of Organizational Behaviour and Applications to the Health Care Sector
HAD 6760Y Introduction to Health Services Research Theory and Methods
HAD 6761H Health Services Outcomes and Evaluation Comprehensive Course
HAD 6762H Health Services Organization and Management Comprehensive Course
HAD 6763H Health Policy Comprehensive Course
HAD 6764H eHealth Innovation and Health Information Management Comprehensive Course
JNH 5000H Health Care Settings, Site and Human Well Being
JNH 5003H Home and Community Care Knowledge Translation
HAD 7001H Reading Course

Health Administration

Master of Health Science
The Master of Health Science 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 a degree without interrupting their careers.

Minimum Admission Requirements
- Normally a B+ average or higher in each of the last two years of an appropriate four-year University of Toronto bachelor’s degree, or its equivalent 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.

Program Requirements
- Completion of 10 full-course equivalents (FCE) of which 8.5 FCE are required subjects and which includes a minimum of 1.0 full-course equivalent in a field placement.
- Degree requirements are normally completed within two years.
Courses

Required Courses

All courses are offered in modular format unless marked otherwise.

- HAD 5010H Canada’s Health System and Health Policy: Part I
- HAD 5020H Canada’s Health System and Health Policy: Part II
- HAD 5711H Theory and Practice of Strategic Planning and Management in Health Services Organization
- HAD 5713H Introduction to Health Information Systems
- HAD 5721H Strategic Management of Quality and Organizational Behaviour in Health Services Organizations
- HAD 5723H Health Services Accounting
- HAD 5724H Quantitative Methods for Health Services Management and Policy
- HAD 5725H Health Economics
- HAD 5731H Advanced Cases in Health Management
- HAD 5733H Health Services Finance
- HAD 5741H Health Law
- HAD 5761H Decision Support Systems in Health Care
- HAD 5767H Health Services Marketing
- HAD 5769H Human Resources Management in the Health Field
- HAD 5770H Program Planning and Evaluation
- HAD 6010Y Required MHSc Practicum (Credit/No Credit)
- HAD 6011H Optional Practicum Extension (Credit/No Credit)

Elective Courses

(non-modular electives may be taken subject to program approval)

- HAD 5714H Strategic Uses of Health Information
- HAD 5765H Case Studies in Health Policy
- HAD 5774H Comparative Health Care Systems
- HAD 5775H Competition, Cooperation and Strategy in Health Care

Combined Master of Health Science/ Master of Nursing Program in Health Administration and Nursing Science

The Combined Master of Health Science/Master of Nursing Program in Health Administration and Nursing Science provides students with a strong interest in both nursing and health administration an opportunity to engage in an integrated program leading to the concurrent receipt of the MHSc and MN degrees.

Minimum Admission Requirements

- Applicants gain independent admission to the Department of Health Policy, Management and Evaluation and to the Faculty of Nursing. Meeting the minimum requirements does not guarantee admission.

- University of Toronto BSc degree in Nursing or a degree from an equivalent program in a recognized university. Minimum B+ standing over the last two years of undergraduate study. The applicant is expected to have good academic standing in non-nursing as well as nursing subjects.
- Successful completion of an introductory course in statistics prior to admission.
- At least three years of work experience in the health care field.

Program Requirements

- Year 1 - Students enrol in Nursing and complete 4.0 full-course equivalents (FCE) for the MN degree.
- Year 2 - Students enrol in HPME and complete a total of 6.5 FCE: 5.5 FCE in MHSc in Health Administration courses plus 1.0 FCE in electives that can be taken from HPME or Nursing.
- Year 3 – 1.0 FCE taken in HPME.

Combined Master of Health Science/ Master of Social Work Program in Health Administration and Social Work

The Combined Master of Health Science/Master of Social Work Program in Health Administration and Social Work allows students with a strong interest in both social work and health/social sciences management the opportunity to engage in an integrated program leading to the concurrent receipt of the MHSc and MSW degrees.

Minimum Admission Requirements

- Applicants gain independent admission to the Department of Health Policy, Management and Evaluation and to the Faculty of Social Work. Note that the deadline for receipt of applications to the MHSc program is February 1 and the deadline for the MSW program is December 1.
- A four-year University of Toronto undergraduate degree, or its equivalent, with B+ or better in each of the last two years. Some preparation in quantitative courses such as statistics, accounting, and macro-economics is preferred.
- Normally a Bachelor of Social Work degree or an appropriate four-year University of Toronto bachelor’s degree, or equivalent from a recognized university, with at least a mid-B average in the final year of full-time study.
- At least three years of relevant work experience.

Program Requirements

- There are two full-time streams of study:
  - three-year program for students admitted with a four-year undergraduate degree
  - two-year program for students with a Bachelor in Social Work degree
- Further details available on the Web site at www.hpme.utoronto.ca/programs/mhsc-msw.htm
Health Informatics

At press time, the Master of Health Informatics program was pending final approval.

The Master of Health Informatics is an innovative professional, graduate-level program which provides graduates with the expertise in clinical, information and communication technologies required to lead organizational and health system change. The MHI degree program prepares health informaticians – clinically and technically savvy solution architects – to bridge the gap between clinicians and information and communication technology (ICT) specialists.

Minimum Admission Requirements

• Students are admitted under the general regulations of the School of Graduate Studies.
• Appropriate four year undergraduate degree, or its equivalent, from a recognized university, and demonstrated English language proficiency. 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. Successful applicants normally have relevant professional experience as a health services professional (e.g., 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.

Program Requirements

• Course-work only program requires the completion of 10.0 full course equivalents (FCE). There is no thesis requirement.
• Students are required to complete a minimum of 1.5 FCE chosen from a menu of Level One half-courses representing introductory health informatics, knowledge in which they are assessed to be weakest (e.g., introductory computer sciences for health practitioners and/or introductory health/clinical systems and policy for technologists).
• All students then converge as a single cohort in a core module to complete an introductory 1.0 FCE in Health Informatics and 4.0 FCE representing key curricular domains of Health Informatics such as health and clinical systems; information processing; eHealth technologies and systems; measurement, decision analysis and evaluation; project management; knowledge management, and decision support.
• A supervised field placement or practicum (2.0 FCE)
• 1.5 elective FCE.

Management of Innovation

Master of Management of Innovation

The Master of Management of Innovation, designed for students with a background in science and technology, is an accelerated 12-month professional degree for individuals pursuing management careers in technology-focused organizations.

Minimum Admission Requirements

• SGS general regulations.
• Four-year university degree in sciences or engineering, or equivalent from a recognized university. Minimum overall grade point average of B+ or 77-79%, 3.3 on a 4.0 scale over the last two years or 10 full-course equivalents (FCE) of full-time academic study.
• Prerequisites or their equivalents are set by the MMI program.
• A resume.
• Applicants who obtained a degree outside Canada must arrange for GMAT or GRE (General) examination results to be sent to the department.
• An on-site written personal statement.
• Attend an interview conducted with at least two faculty who will evaluate problem solving capabilities and communication skills

Program Requirements

• The 12-month program consists of an intensive 8-month core academic curriculum consisting of:
  o 4.0 required full-course equivalents (FCE)
  o 2.0 elective FCE (1.0 FCE per session in each of the fall and winter sessions)
  o a final capstone course (a group project equivalent to 0.5 FCE) during the final four months of the program
• All requirements must be completed within a minimum of one year of study and a maximum of five years from the date of first enrolment.

Courses

Required Core Courses

MMI 1010H Prices and Markets
MMI 1020H Applied Econometrics for Managers
MMI 1030H Marketing Science
MMI 1050H Accounting and Negotiations
MMI 1060H Finance
MMI 1070H Economics of Business Strategy
MMI 1080H Management of Technology
MMI 1090H Technology, Strategy and Policy
MMI 1100H Capstone Course – Final Group Project

Elective Courses

Students are encouraged to select electives that allow them to focus on their individual areas of interest. For this reason the MMI 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 HPME Chair.

Graduate Faculty

Full Members
Geoff Anderson - BSc, MD, MSc, PhD
G. Ross Baker - BA, MA, PhD
Janet Barnsley - BSc, MSc, PhD
Claire Bombardier - MA, MD, FRCP(C)
Shelley Bull - BMath, MMath, PhD
David Cassidy - BSc, DC, MSc, PhD, Dr Med Sc
Angela Cheung - BA, MD, PhD, FRCP(C)
Rhonda Cockrell - BA, MA, PhD (Chair of Graduate Studies)
Marsha Cohen - BSc, MHSc, MSc, MD, FRCP(C)
Rebecca Cook - AB, MA, MPA, JD, LLM, JSD
Peter C Coyte - BA, MA, PhD
Tony Culyer, CBE, BA, HonD Econ, HonFRCP, FRSAC, FMedSci
David Davis - BA, MD, FCPh, CCFP
Raisa Deber - SB, SM, PhD
Allan Detsky - BS, MD, PhD
Sandra Donnelly - BSc, MSc, MD, FRCP(C)
Thomas Einarson - BScPhm, MEd, MPharm, MSc, PhD
Gunther Eysenbach - MD, MPH, IP
Brian Feldman - MSc, FRCPC(R), FRCPC(P), LMCC, MD
Paul Fortin - MD, MPH, FRCP(C)
Richard Glazier - MPH, MD
Vivek Goel - MD, CM, MSc, SM, FRCP(C)
Paula Goering - RN, BSN, MSN, PhD
Brian Green - BS, SM, PhD
Hugh Gunz - BSc, DPhil, PhD
Mary Harnett - BSc, MSc, MD, CM
Gillian Hawker - BSc, MSc, MD, FRCP(C)
Sheilah Hogg-Johnson - BSc, BMath, MMath, PhD
D. Linn Holness - BSc, MSc, MD
Alejandro Jadad - MD, PhD, FRCP(C)
Murray Krahn - BA, MSc, MD, FRCP(C)
Nancy Kreiger - BA, MPH, MPHIL, PhD
Andreas Laupacis - MSc, MD, FRCP(C)
Louise Lemieux-Charles - BScN, MScN, PhD (Chair)
Kevin Leonard - BComm, MBA, PhD
Hilary Llewellyn-Thomas - BScN, MScN, PhD
Alexander Logan - MD, FRCP(C)
Heather Maclean - BSc, MSc, DipNutr, EdD
John Ross Mclaughlin - MSc, PhD
Fiona Miller, BSc, MA, PhD
Ted Myers - BA, MSc, MSW, PhD
I. Gary Naglie - BSc, MDCM, FRCP(C), ABM
C. David Naylor - MD, DPhil, FRCP(C)
Linda-Lee O’Brien-Pallas - BScN, MScN, PhD, National Research Chair in Nursing Human Resources
Arne Ohlsson - MSc, MD, FRCP(C)
Donald Redelmeier - MS, MD, FRCP(C), De Souza Chair in Trauma Research
Paula Rochon - MD, MPH, FRCP(C)
Andrea Sass-Kortsak - BSc, MHSc, PhD
Therese Stukel - PhD, MAF, BSc (Hon), Math (Magna cum laude)
Yves Taibot - MD
Ian Tannock - BA, MD, PhD, FRCP, The Daniel E Bersagel Chair in Medical Oncology
Teresa To - BSc, MS, PhD
Mihkel Tombek - BASc, MBA, AM, PhD
Jack Ven Tu - MD, PhD, Canada Research Chair
Ross Edward Upshur - MA, MD, MSc, FRCP(C)
David Urbach - MD, MSc, FRSCC
Elaine Wang - MD, MSc, FRCP(C)
Donald Wasyljenki - BA, MSc, MD, FRCP(C)
Paul Williams - PhD
James Wright - MD, MPH, RB Salters Chair of Paediatric Surgical Research
Lionel Trevor Young

Members Emeriti
J Michael Bliss - BA, MA, PhD, FRSC, University Professor
Bernard Dickens - LLB, LLM, PhD, LLD, Dr. William M Scholl Professor Emeritus in Health Law and Policy
John El Hastings - MD, DPH, FRCP(C)
Eugene Vayda - MD, FRCP(C), FACP

Associate Members
Shabbir Aliabadi, MD, MSc, FRCPC
Upton Allen - MBBS, MSc, FAAP, FRCP(C)
Carlo Ammendolia, DC, PhD
Fredrick Ashbury, PhD
Thomas Astebro - MSc, TECHLIC, PhD
Peter Austin - BSc, MSc, MSc, PhD
Lisa Barbera, BSc, MD, MPA, FRCP(C)
Nancy Baxter, MD, PhD, FRCP(C)
Ahmed Bayoumi - MSc, MD, FRCP(C)
Dorcas Beaton - BSc(OT), MSc, PhD
Whitney Beria - PhD
Andrea Bezjak - BMScD, MSc, FRCP(C)
John Bohnen - MD, FRCP(C), FACS
Heather Boon - BScPhm, PhD
Janis Lynne Browne - BA, MA
Benjamin Chan, MD, MPH, MPA
Christopher Chan, MD, FRCP(C)
Alice Charach
Sujit Choudhry - BSc, BA, LLB, LLM
Ruth Mw Corbin - BSc, MSc, MA, PhD
Aileen Davis - BSc(PT), MSc, PhD
Sharon Dell, BEng(Eng Physics), MD, FRCP(C)
Paul Dick - MD, FRCP(C)
Rumona Dickson, BSc, MSc, MD, FRCP(C)
Mark Dobrow, PhD
Edward Etchells - MSc, MD, FRCP(C)
Darby Fehlings
Denise Feig - BSc, MSc, FRCP(C), MD
Colleen Flood - BA, LLB, LLM, SJ
Anna Galgardi, BSc, BEd, MSc, MLS, PhD
Brenda Gamble - BA, MSc, PhD
Paul Gamble - PhD
William Geerts - BSc, BMedSci, MD, FRCP(C), FCCP

Degree Programs

Health Policy, Management and Evaluation 209
Degree Programs

Jennifer Gibson, PhD
Julie Gilbert, BSc, MSc, PhD
Sholom Glouberman - BA, PhD
Meredith Goldwasser, BA, ScM, ScD(PhD)
Pamela Goodwin - MSc, MD, FRCP(C), The Marvelle Koffler Chair in Breast Research
Denise Guerriere - PhD
Mark Guttmann, MD, FRCP(C)
Jill Hayden, PhD
David Hodgson - MD, MPH, FRCP(C)
Andrew Howard - MD, MSc, FRCS(C)
Pam Hudak, BSc, MSc, PhD
Janet Hux - BSc, MSc, MD, FRCP
Stephen Hwang - MD, MPH, FRCP(C)
Cynthia Jackevicius - BSc, MSc
Susan Jagial - BSc, MSc, PhD
Sarbjit Vanita Jassal - MD, MB, BCh, BA(O(dist), MRCP(UK), MSc
David Juurlink, MD, PhD, FRCP(C)
Moira Kapral - MSc, MD, FRCP(C)
Mary Kelley, BA, BSW, MSW, PhD
Erin Kennedy, MD, PhD, FRCSC
Camran Khan, MD, MPH
Alexander Kiss, PhD
Nicol Korner-Bilansky, PhD, OT(c), erg.
Hans Kreder - MD, FRCS(C), MPH
Audrey Laporte - PhD
Elizabeth Lin - BA, MSc, PhD
Mona Louty, MD, FRCP(C), MPH
Anu MacIntosh-Murray
Andreas Maetzel - MD, MSc, PhD
Nizar Mahomed - MD, ScD
Faith Malach - MHSc, MSW, RSW
Muhammad Mamdani, PHARMD, MA, MPH
Douglas Kenneth Martin - BSc, PhD
Brian McCrindle - MD, MPH, FRCP(C), FACC
Allison McGeer - BSc, MSc, MD, FRCP(C)
Leslie Mitchell - MSc
Lynn Moore, MHSc
Laurie Morrison - MD, FRCPC
Michael Murray - BA, MA, PhD
David Naimark - MD, BSc, MSc, FRCP(C)
Robert Nam, MHSc, FRCSC
Paul Nathan, MD, FRCP(C), MSc
Avery Nathens, MD, PhD, MPH, FACS
Eric Nauenberg - PhD, MMP/MH
Lawrence Nestman - BComm, CA, MHisA
Paul O’Connor - MSc, MD
Anthony Otley, MD, MSc, FRCPC
Kenneth Pace, BSc, MD, FRCSC
Valerie PaIda - MD, MSc, FRCP(C)
Diane Parker, BA, PhD
Patricia Parkin - BSc, MD, FRCP(C)
Christopher Parshuram, MB, ChB, DPhil, FRACP
Lawrence Paszat - BA, MD, MS, FRCP(C)
Colin Preyra - MSc, PhD
Gaylene Pron - BSc, MSc, PhD
Michael Rachlis - MD, MSc
Darlyne Rath - BScN, MSc
Jolie Ringash - BSc, MSc, MD, FRCP(C)
Gustavo Saponsnik, MSc, MD

Carol Sawka - BMSc, MD
Barbara Secker - BA, MA, PhD
Aviv Shachak, MSc, PhD
Baiju Shah, MD, PhD, FRCP(C)
Shirlee Sharkey, BA, BScn, MHSc, CHE
Sam Shortt, MPA, MD, PhD
Lianne Singer - MD
M Virginia Sinnott
Tina Smith - BSc, MSc
Matthew Stanbrook, MD, PhD, FRCP(C)
Barbara Starfield (Hottzman)
A. Hillary Steinhart - BA, MD, FRCP(C), MSc
Polly Stevens, BA, MHSc
Padmaj Subbarao, MD, MSc, FRCP(C)
Terrence Sullivan - BSc, MA, PhD
Gary Teare - DVM, MSc, PhD
George Tolomiczenko - MPh, PhD, CPsych
Wendy Ungar - BA, MSc, PhD
Sunita Vohra, MD, MSc
Paul Wales, MD
Sharon Walmsley - MD, FRCP(C)
Hilary Whyte - MSc, MD, FRCP, FRCP(C)
Donald Willison - BSc., MSc, ScDesign, ScD
Garcia Wilson-Galhego, MA, PhD
Rory Windrim - MSc, MB, FRCSC
Wendy Wobeser - MD, FRCP(C)
Walter Wodchis, BSc, MA, MEcon, PhD
Rebecca Wong - MD
Frances Wright, MD, BSc, MEd, FRCS
Nancy Young - BSc(PT), MSc, PhD (Adjunct)
David Zakus - BSc, MES, MSc, PhD

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History  HIS

Faculty Affiliation
Arts and Science

Degree Programs Offered
History – MA, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Asia-Pacific Studies, see p. 413
   • History, MA
2. Book History and Print Culture, see p. 424
   • History, MA, PhD
3. Editing Medieval Texts, see p. 437
   • History, PhD
4. Ethnic and Pluralism Studies, see p. 445
   • History, MA, PhD
5. International Relations, see p. 458
   • History, MA
6. Jewish Studies, see p. 460
   • History, PhD
7. Sexual Diversity Studies, see p. 469
   • History, MA, PhD
8. South Asian Studies, see p. 471
   • History, MA, PhD
9. Women and Gender Studies, see p. 473
   • 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. The Department has a special strength in gender history, medieval history, transnational history, colonialism, the Americas, Europe, and Russia. Courses are offered in the history of Canada; the United States; Medieval, Early Modern and Modern Europe and Britain; Eastern Europe; Russia; Latin America; Africa; South Asia; East Asia; Southeast Asia; International Relations; the History of Medicine and Women’s History. Students may specialize in any of these areas.

The University of Toronto also offers rich resources outside the department to support the study of history. The Robarts Research Library, unrivaled 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 Center for Medieval Studies and the Pontifical Institute have particularly strong resources for European and British medieval history. The Munk Center for International Studies; the Institute for the History and Philosophy of Science and Technology; the Center of Criminology; the Institute for Urban and Community Studies; as well as the Center for European, Russian, and Eurasian Studies afford additional opportunities for interdepartmental work. The Department participates in a number of interdisciplinary collaborative programs.

Contact and Address
Web: www.chass.utoronto.ca/history
E-mail: histgrad@chass.utoronto.ca
Telephone: (416) 978-3369

Department of History
Room 2074, Sidney Smith Hall
University of Toronto
Toronto, Ontario M5S 3G3
Canada

Degree Programs
Master of Arts

Minimum Admission Requirements
• Four-year BA degree from the University of Toronto or a similar program elsewhere with at least a B+ standing.
• Successful completion of at least 6.0 full-course equivalents (FCE) 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 information form, three letters of recommendation, a 500-word specific research proposal outlining a precise field and area of historical investigation, and 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 facility in the English language through the successful completion of the Test of English as a Foreign Language (TOEFL) with scores of at least:
  o Paper-based TOEFL exam: 600 with 5 on the Test of Written English
  o Computer-based TOEFL exam: 250 with 5 on the essay rating component
  o Internet-based TOEFL exam: 100/120 with 22/30 on the writing and speaking sections.

Program Requirements
• Students usually complete the MA by course work and the HIS 2000Y paper. Some students may elect to complete the MA by course work and thesis.
• After consulting with the graduate coordinator, all MA students are required to take either HIS 1997H or HIS 1201H.
Degree Programs

- Students must achieve at least an overall B average in their courses to maintain standing.
- Students must also pass the required reading examination in a language other than English.
- The MA may be undertaken on a part-time basis; however, program requirements must be completed within a maximum of five years.

Course Work and Paper
- 4.5 full-course equivalents (FCE) (of which 0.5 must be either HIS 1997H or HIS 1201H) and the MA essay. Normally, up to 1.0 FCE may be taken outside the Department of History with the approval of the Coordinator of Graduate Studies.
- Full-time MA students are expected to complete all degree requirements within 12 months of entering the program.

Course Work and Thesis
- 2.0 FCE (of which 0.5 must be either HIS 1997H or HIS 1201H) and present an MA thesis. Normally, up to 1.0 FCE may be taken outside the Department of History with the approval of the Coordinator of Graduate Studies.
- The thesis MA might take longer than the course MA. The thesis must be presented within five years of entering the program.

Doctor of Philosophy

Minimum Admission Requirements
- Applicants may enter the PhD program via one of two routes:
  - Normally, with an MA degree in history or its equivalent with an A- average or better.
  - Exceptional students may be admitted by direct entry to the PhD program 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 information form, three letters of recommendation, a 500-word specific research proposal outlining a precise field and area of historical investigation, and 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 facility 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
  - Computer-based TOEFL exam: 250 with 5 on the essay rating component
  - Internet-based TOEFL exam: 100/120 with 22/30 on the writing and speaking sections.

Program Requirements
- Course work.
  - With MA degree in history: 2.0 full-course equivalents (FCE) with a B+ average throughout course work.
  - By direct entry: 4.0 FCE, one of which should be HIS 1997H. Students must maintain an A- average in their first 2.0 FCE in order to continue in the program.
- Residence requirement. PhD students are required to be in residence until they have passed their field examinations but no longer than a period of two years. 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.
- Comprehensive examinations in three approved fields of history. At the beginning of their programs, students consult with the Coordinator of Graduate Studies to determine their fields. Three fields are required: a major and two minors. The major should coincide with the subject area that the student has chosen for the thesis, and the two 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 three fields.
- 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 and may be asked to qualify in other program-related languages.
- Thesis. When all of the above requirements are completed, the candidate will proceed to write the PhD thesis and defend it at a final oral examination.
- Time to Completion. Although it is possible to complete these requirements within four years, in most cases it will take longer. The thesis must be presented within six years of first enrolment in the PhD program.

Courses
Not all courses are offered every year. Please consult the Department's list of current course offerings.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>HIS 1004H</td>
<td>History and Biopolitics</td>
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<tr>
<td>HIS 1005H</td>
<td>Historiography &quot;From Below&quot;: Compar</td>
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<td>eative and Critical Perspectives</td>
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<tr>
<td>HIS 1009H</td>
<td>Colonial Governmentality: Governing</td>
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<td>Economy and Culture</td>
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<td>HIS 1010H</td>
<td>History by Numbers: The Uses and</td>
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<td>Misuses of Quantitative Evidence in</td>
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<td>History</td>
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<td>HIS 1015H</td>
<td>Colonial Encounters and Postcolonial</td>
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<td>Theory</td>
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<td>HIS 1016H</td>
<td>Readings in the History of Gender</td>
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<td>and Sexuality</td>
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<tr>
<td>HIS 1020H</td>
<td>Cultural Theory/Cultural History</td>
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<tr>
<td>Course Code</td>
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<tr>
<td>HIS 1026H</td>
<td>Modernity and Its Others: History and Postcolonial (joint graduate/undergraduate)</td>
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<tr>
<td>HIS 1030H</td>
<td>Oral History: Theory, Methods, Practice</td>
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<tr>
<td>HIS 1035H</td>
<td>Historiography and Film Studies (joint graduate/undergraduate)</td>
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<tr>
<td>HIS 1036H</td>
<td>Early Cinema</td>
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<tr>
<td>HIS 1101H</td>
<td>Race and Gender in the Northern Colonies of North America</td>
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<tr>
<td>HIS 1104H</td>
<td>Natives and Empires: Colonial History of the Americas, 1492-1800</td>
</tr>
<tr>
<td>HIS 1105H</td>
<td>Colonial North America, 1600-1783</td>
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<td>HIS 1106H</td>
<td>Topics in Canadian Social History</td>
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<tr>
<td>HIS 1107H</td>
<td>Religion, Culture and Society in Canada (joint graduate/undergraduate)</td>
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<td>HIS 1109H</td>
<td>Readings in Canadian History</td>
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<tr>
<td>HIS 1111H</td>
<td>Topics in North American Environmental History (joint graduate/undergraduate)</td>
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<tr>
<td>HIS 1112H</td>
<td>Canada in Comparative Contexts, Gender, Labour, Migration</td>
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<td>HIS 1113H</td>
<td>Politics and Society in North American History</td>
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<tr>
<td>HIS 1114H</td>
<td>Indigenous Histories in North America</td>
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<tr>
<td>HIS 1142Y</td>
<td>Canadian Foreign Relations, 1940-2003</td>
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<tr>
<td>HIS 1164H</td>
<td>Irish Migration to Canada: Sources and Methods</td>
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<tr>
<td>HIS 1201H</td>
<td>The Materials of Medieval History: Sources and History (Credit/No Credit)</td>
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<tr>
<td>HIS 1207H</td>
<td>Pastoralia: The Medieval History of Pastoral Care</td>
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<td>HIS 1208H</td>
<td>Writings of Robert Grosseteste</td>
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<tr>
<td>HIS 1209H</td>
<td>The Anglo-Saxons</td>
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<td>HIS 1210H</td>
<td>Gregory of Tours and the Sixth Century</td>
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<tr>
<td>HIS 1213H</td>
<td>Medieval Institutes of Perfection (joint graduate/undergraduate)</td>
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<tr>
<td>HIS 1214H</td>
<td>The Merovingians</td>
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<tr>
<td>HIS 1215H</td>
<td>Social Change in Medieval England, 1154-1279</td>
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<tr>
<td>HIS 1218H</td>
<td>The Mediaeval Church (joint graduate/undergraduate)</td>
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<tr>
<td>HIS 1220H</td>
<td>Mediaeval Canon Law (joint graduate/undergraduate)</td>
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<tr>
<td>HIS 1221H</td>
<td>Topics in Early Modern European Social History</td>
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<tr>
<td>HIS 1222H</td>
<td>Ritual in Renaissance and Early Modern Europe</td>
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<td>HIS 1223H</td>
<td>Humanism and the Renaissance</td>
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<td>HIS 1230H</td>
<td>The Sexes in the Western World, 1450-1650</td>
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<tr>
<td>HIS 1231H</td>
<td>Topics in French History</td>
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<tr>
<td>HIS 1232H</td>
<td>European Colonialism, 1870-1970: A Comparative History</td>
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<tr>
<td>HIS 1233H</td>
<td>Colonial Urbanism in the Mediterranean World, 1800-1950</td>
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<td>HIS 1234H</td>
<td>Readings in Early Modern French History in/of the Mediterranean: From Braudel to Post-Colonialism</td>
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<td>HIS 1235H</td>
<td>History in/of the Mediterranean: From Braudel to Post-Colonialism</td>
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<tr>
<td>HIS 1235H</td>
<td>Gender, Men and Women in Europe, 1500-1900</td>
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<tr>
<td>HIS 1265H</td>
<td>Atrocities and Memory in Postwar Europe and North America</td>
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<tr>
<td>HIS 1267H</td>
<td>Nationalism</td>
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<td>HIS 1268H</td>
<td>The Holocaust and World War II</td>
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<td>HIS 1269H</td>
<td>The Social History of Medicine in the Nineteenth and Twentieth Centuries</td>
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<tr>
<td>HIS 1270H</td>
<td>History of Psychiatry and Psychiatric Illness</td>
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<td>HIS 1271H</td>
<td>Modern Political Trials</td>
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<tr>
<td>HIS 1272H</td>
<td>Topics in Twentieth-Century European History</td>
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<tr>
<td>HIS 1275H</td>
<td>Imperial Germany, 1871-1918</td>
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<tr>
<td>HIS 1276H</td>
<td>The Third Reich and the Holocaust</td>
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<tr>
<td>HIS 1277H</td>
<td>Topics in Jewish History</td>
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<td>HIS 1278H</td>
<td>Topics in Twentieth-Century German History</td>
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<tr>
<td>HIS 1279H</td>
<td>World War II in East Central Europe</td>
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<td>HIS 1280Y</td>
<td>History and Soviet Cinema</td>
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<td>HIS 1281H</td>
<td>History of Real Socialism</td>
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<td>HIS 1282H</td>
<td>Totalitarian Culture</td>
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<td>HIS 1283H</td>
<td>Crusades, Conversion and Colonization in the Medieval Baltic</td>
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<tr>
<td>HIS 1285Y</td>
<td>The Ukrainian National Revival</td>
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<tr>
<td>HIS 1286H</td>
<td>Categories of Imperial Russian Social History</td>
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<td>HIS 1287H</td>
<td>Polish Jews Since the Partitions of Poland</td>
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<td>HIS 1288H</td>
<td>The Age of Experiments</td>
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<td>HIS 1289H</td>
<td>The Cold War Through Its Archives</td>
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<tr>
<td>HIS 1290H</td>
<td>Topics in Imperial Russian History</td>
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<td>HIS 1291H</td>
<td>Topics in Russian and Soviet Social History</td>
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<tr>
<td>HIS 1292H</td>
<td>The Russian Revolution</td>
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<tr>
<td>HIS 1293Y</td>
<td>Kievian Rus' (joint graduate/undergraduate)</td>
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<tr>
<td>HIS 1294H</td>
<td>In the Soviet Archives: Text and History (joint graduate/undergraduate)</td>
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<td>HIS 1295H</td>
<td>Soviet History Seminar</td>
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<tr>
<td>HIS 1296H</td>
<td>Stalinism and After: Beyond Cold War History</td>
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<tr>
<td>HIS 1297H</td>
<td>Problems of National Survival in Eastern Europe Since 1848 (joint graduate/undergraduate)</td>
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<tr>
<td>HIS 1299H</td>
<td>Topics in Russian Intellectual History</td>
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<tr>
<td>HIS 1411H</td>
<td>Theory and Practice in Early Modern British History</td>
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<tr>
<td>HIS 1425H</td>
<td>British Social Realism and Cinema</td>
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<tr>
<td>HIS 1435H</td>
<td>Studies in Victorian Society</td>
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<tr>
<td>HIS 1440H</td>
<td>Irish Nationalism in Canada and the United States (joint graduate/undergraduate)</td>
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<tr>
<td>HIS 1519H</td>
<td>Thinking of Diversity: Historical Perspectives on American and Canadian Pluralisms</td>
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### Degree Programs

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<tr>
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<th>Course Title</th>
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<tr>
<td>HIS 1522H</td>
<td>Topics in Twentieth-Century U.S. History: Transnational Commodity Culture</td>
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<tr>
<td>HIS 1524H</td>
<td>Topics in the History of Black America</td>
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<tr>
<td>HIS 1530H</td>
<td>Readings in Twentieth Century American Foreign Policy</td>
</tr>
<tr>
<td>HIS 1531H</td>
<td>American Political History Since 1877</td>
</tr>
<tr>
<td>HIS 1532H</td>
<td>American Foreign Policy in the Cold War</td>
</tr>
<tr>
<td>HIS 1533H</td>
<td>Gender and International Relations (joint graduate/undergraduate)</td>
</tr>
<tr>
<td>HIS 1535H</td>
<td>Readings in International Relations History</td>
</tr>
<tr>
<td>HIS 1538H</td>
<td>Research in U.S. History</td>
</tr>
<tr>
<td>HIS 1539H</td>
<td>Film Comedy and Popular Culture</td>
</tr>
<tr>
<td>HIS 1540H</td>
<td>Cultures of American Capitalism</td>
</tr>
<tr>
<td>HIS 1543H</td>
<td>Topics in Material Culture</td>
</tr>
<tr>
<td>HIS 1545H</td>
<td>Race, Segregation and Protest: South Africa and the United States</td>
</tr>
<tr>
<td>HIS 1550H</td>
<td>Atlantic Labour Migrations</td>
</tr>
<tr>
<td>HIS 1555H</td>
<td>Gender and Slavery in the Atlantic World, Seventeenth to Nineteenth Century</td>
</tr>
<tr>
<td>HIS 1630H</td>
<td>Appeasement</td>
</tr>
<tr>
<td>HIS 1632H</td>
<td>International Relations Field Seminar</td>
</tr>
<tr>
<td>HIS 1637H</td>
<td>Culture and the Cold War (joint graduate/undergraduate)</td>
</tr>
<tr>
<td>HIS 1663H</td>
<td>Gender in East and Southeast Asia</td>
</tr>
<tr>
<td>HIS 1664H</td>
<td>Religion and Society in Southeast Asia</td>
</tr>
<tr>
<td>HIS 1665H</td>
<td>Gender and History in Colonial South Asia</td>
</tr>
<tr>
<td>HIS 1667H</td>
<td>Transnational Gender Histories</td>
</tr>
<tr>
<td>HIS 1677H</td>
<td>Empire and Nation in Modern East Asia</td>
</tr>
<tr>
<td>HIS 1678H</td>
<td>War and Memory in Twentieth-Century East Asia</td>
</tr>
<tr>
<td>HIS 1701H</td>
<td>Religion, Society and Empire in the Colonial Spanish Americas, 1492-1800</td>
</tr>
<tr>
<td>HIS 1704H</td>
<td>Latin America in the Age of Independence</td>
</tr>
<tr>
<td>HIS 1705H</td>
<td>Africa: Writing, Colonialism and Memory</td>
</tr>
<tr>
<td>HIS 1706H</td>
<td>Decolonizing Research Methodologies</td>
</tr>
<tr>
<td>HIS 1707H</td>
<td>Topics in African History</td>
</tr>
<tr>
<td>HIS 1708H</td>
<td>Labour in the Age of Imperialism</td>
</tr>
<tr>
<td>HIS 1709H</td>
<td>Conversion and Christiansities in the Early Modern Spanish World (joint graduate/undergraduate)</td>
</tr>
<tr>
<td>HIS 1710H</td>
<td>Comparative Slavery in the Caribbean and Latin America</td>
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<tr>
<td>HIS 1784H</td>
<td>The Islamic Revolution</td>
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<tr>
<td>HIS 1997H</td>
<td>The Practice of History (Credit/No Credit)</td>
</tr>
<tr>
<td>HIS 1998H,Y</td>
<td>Reading Course</td>
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<tr>
<td>HIS 1999H,Y</td>
<td>Reading Course</td>
</tr>
<tr>
<td>HIS 2000Y</td>
<td>Directed Research</td>
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<tr>
<td>JBP 2230H</td>
<td>Topics in International Politics</td>
</tr>
<tr>
<td>JHP 1289Y</td>
<td>Twentieth Century Ukraine (joint graduate/undergraduate)</td>
</tr>
<tr>
<td>JHP 1631H</td>
<td>Intelligence and International Relations</td>
</tr>
<tr>
<td>JHP 2231H</td>
<td>The History and Philosophy of International Relations Thought</td>
</tr>
<tr>
<td>JHP 2301Y</td>
<td>Linguistic and Cultural Minorities in Europe (joint graduate/undergraduate)</td>
</tr>
</tbody>
</table>

### Courses in Other Departments Taught by History Faculty

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>COL 5027H</td>
<td>Memory, Trauma, and History</td>
</tr>
<tr>
<td>MST 1110H</td>
<td>Diplomatics and Diplomatic Editing</td>
</tr>
<tr>
<td>MST 1120H</td>
<td>Literacy in Early Medieval Europe</td>
</tr>
<tr>
<td>MST 3201H</td>
<td>Medieval Social History</td>
</tr>
<tr>
<td>MST 3205H</td>
<td>Violence in Medieval Society (joint graduate/undergraduate)</td>
</tr>
<tr>
<td>MST 3225Y</td>
<td>Jews and Christians in Medieval and Renaissance Europe (joint graduate/undergraduate)</td>
</tr>
<tr>
<td>MST 3242H</td>
<td>The Carolingians and the Birth of Europe</td>
</tr>
<tr>
<td>MST 3243H</td>
<td>Dark Age Italy</td>
</tr>
<tr>
<td>MST 3262H</td>
<td>Monastic Identities</td>
</tr>
<tr>
<td>MST 3265H</td>
<td>Hagiographies</td>
</tr>
</tbody>
</table>

### Other Departments

Students may take courses from other departments for graduate history credit with permission of the Graduate Coordinator. Interested students should consult the appropriate calendar entries and departmental Web sites for current course offerings.

### Graduate Faculty

#### Full Members

- L Jane Abray - BA, MA, MPh, PhD
- Sidney Aster - BA, MA, PhD
- Robert Austin - BA, MA, PhD
- Kenneth Bartlett - BA, MA, PhD
- Daniel Eric Bender - MA, PhD, Canada Research Chair
- Doris Bergen - BA, MA, PhD
- Ritu Birla - BA, MA, MPhil, PhD
- Peter Blanchard - BA, PhD
- Heidi Bohaker - BA, MA, PhD
- Robert Bothwell - BA, AM, PhD, FRSC
- Elspeth Brown - BA, MPhil, MA, PhD
- Carol Chin - BA, MA, PhD
- Isabelle Cochelin - BSc, BA, MA, DEA, PhD
- Paul Cohen - BA, MA, PhD
- E Wayne Dowler - BA, AM, PhD
- Modris Eksteins - BA, BPhil, DPhil
- Nicholas Everett - BA, PhD
- Michael Gervers - AB, MA, PhD
- Joseph Goering - BA, MAR, MA, MSL, PhD
- Allan Greer - BA, MA, PhD
- Bert Hall - BA, PhD
- Eric Halpern - BA, MA, PhD
- Sean Hawkins - BA, MA, PhD, FCCS
- Adrienne Hood - BA, MA, PhD
- Franca Iacovetta - BA, MA, PhD
- John Ingham - BA, MA, PhD
- Jennifer Jenkins - BA, MA, PhD
- Eric Jennings - BA, MA, PhD
- Robert Johnson - BA, MA, PhD
- Malavika Kasturi - BA, MPHIL, MA, PHD
- Ken Kawashima - BA, MA, PhD
- Russell Kazal - BA, MA, PhD

*Courses which may continue over a program. The course is graded when completed.*
Charles Keil - BA, MA, PhD
Bruce Kidd - BA, AM, MA, PhD, OC
Robert King
Juri Kivimae - BA, PhD
Thomas Lahusen - BA, MA, PhD
Tong Lam - BSc, MA, PhD
Janis Langins - BEng, MA, MEng, PhD
Lori Loeb - BA, MMSI, PhD
Laurel MacDowell - BA, MSc, PhD
Margaret MacMillan - BA, BPhil DPhil
Paul Magocsi - AB, MA, MA, PhD, FRSC
Michael Marrus - BA, MA, PhD, FRHistS, FRSC,
Chancellor Rose and Ray Wolfe Professor of Holocaust Studies
Mark McGowan - BA, MA, PhD
Mark Meyerson - BA, MA, PhD
Kenneth Mills - BA, MA, DPhil
Cecilia Louise Morgan - BA, MA, PhD
Jennifer Mori - BA, DPhil
Michelle Murphy - BA, PhD
Alexander Murray - BA, PhD
Nakanyike Musisi - PhD
Melanie Newton - BA, MA, DPhil
Janet Noel - BA, MA, PhD
Steven Penfold - BA, MA, PhD
Derek Penslar - BA, MA, PhD
James Phillips - MA, LLB, PhD
Ronald Pruessen - BA, MA, PhD
Ian Radforth - BA, MA, PhD
James Retallack - BA, DPhil
Stephen Rockel - BA, MA, PhD
Jill Ross - BA, MA, PhD
Andrew Rossos - BA, MA, PhD
Natalie Rothman - MA, PhD
Paul Rutherford - BA, MA, PhD
Andre Schmid - BA, MA, PhD
Edward Shorter - BA, MA, PhD, FRSC
Giulio Silano - BA, BEd, LLB, MA, PhD
Alison Smith - BA, MA, PhD
Denis Smyth - BA, PhD, FRHistS
Ashwini Tambe - BA, MS, PhD
Mohamad Tavakoli-Targhi - BA, MA, PhD
Nicholas Terpstra - BA, MA, PhD
Barbara Todd - BA, MA, PhD
Nhung Tran - BA, MA, PhD
Harold Troper - BA, MA, PhD
Lynne Viola - BA, MA, PhD
Wesley Wark - BA, MA, PhD
Michael Wayne - BA, PhD
Derek Williams - BA, MA, PhD
David Wilson - BA, MA, PhD, FRHS
Rebecca Wittmann - BA, MA, PhD
Piotr Jan Wrobel - MA, PhD

J Michael Bliss - BA, MA, PhD, FRSC, University Professor
Robert Craig Brown - BA, MA, PhD FRSC
John Brownlee - BA, MA, MPh
William Callahan - AB, MA, PhD
Ramsay Cook - BA, MA, PhD, OC, FRSC
Natalie Davis - BA, MA, PhD, FAmAcAs, CFBaAc
Julian Dent - BA, MA, PhD
Harvey Dyck - BA, MA, PhD
James Estes - PhD
Michael Finlayson - BA, MA, PhD
Walter Goffart - AB, AM, PhD, FMAA, FRHistS, FRSC
Paul Grendler - BA, MA, PhD
Richard Helmstadter - BA, MA, PhD
David Higgs - BA, MA, PhD
Milton Israel - BA, MA, PhD
Martin Klein - BS, MA, PhD
Jacques Kornberg - BA, PhD
Trevor Levere - BA, MA, DPhil, DLitt, FRSC
Trevor Lloyd - BA, MA, PhD
Desmond Morton - BA, MA, PhD, FRSC, OC
Wendy Nelson - BA, MA, PhD
David Raby - BA, PhD
Ian Robertson - BA, MA, PhD
Ann Robson
Sylvia Van Kirk - BA, MA, PhD
Narendra Wagle - BA, MA, PhD

Associate Members
Jens Hanssen - BA, MPhil, DPhil
Hui Kian Kwee
Shaftique Virani - BA, MA, PhD
William Walker III - BA, MA, PhD
William Young - BA, MA, PhD

Members Emeriti
Robert Accinelli - BA, MA, PhD
John Beattie - BS, MA, PhD, FRSC, University Professor Emeritus
Carl Berger - BA, MA, PhD, FRSC
William Berman - BA, MA, PhD

History 215
History and Philosophy of Science and Technology  HPS

Faculty Affiliation
Arts and Science

Degree Programs Offered
History and Philosophy of Science and Technology – MA, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Book History and Print Culture, see p. 424
   • History and Philosophy of Science and Technology, MA, PhD

Overview
The Institute for the History and Philosophy of Science and Technology (IHPST) offers two degree programs: Master of Arts and Doctor of Philosophy. The Institute 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 participate in the IHPST colloquia, which are open to the University community.

Admission is highly selective and competitive. Acceptance is based on a combination of grades, references, academic and professional accomplishments, and areas of interest. All the forms required for application, including the standard application form, can be downloaded from the Institute’s Web site. The Web site also contains detailed instructions for completing applications. Applications must be accompanied by transcripts, a statement of interest, and letters of reference. A writing sample is not required, but is recommended. Application deadline is February 1. Applicants who wish to take one or more of the courses offered by the Institute 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.

Contact and Address
Web: www.hps.utoronto.ca/
E-mail: ihpst.info@utoronto.ca
Telephone: (416) 978-5397
Fax: (416) 978-3003

Institute for the History and Philosophy of Science and Technology
Old Victoria College
Room 316, 91 Charles Street West
University of Toronto
Toronto, Ontario M5S 1K7
Canada

Degree Programs

Master of Arts

Minimum Admission Requirements
• General regulations of the School of Graduate Studies.
• Four-year University of Toronto bachelor’s degree, or its equivalent from a recognized university with an average grade of at least B+ in the final two years of undergraduate work.
• 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:
  o Paper-based TOEFL: 580 and 5 on the TWE
  o Computer-based TOEFL: 237 and 5 on the essay-rating component
  o Internet-based TOEFL: 93/120 and 22/30 on the writing and speaking sections

Program Requirements
• Minimum of 3.5 full-course equivalents (FCE). Among these, each student must take either:
  o 1.5 FCE History of Science Fundamentals courses (HPS 5000 series) and 1.0 FCE Philosophy of Science courses (History of Science Stream)
  o 1.5 FCE Philosophy of Science courses and 1.0 FCE History of Science Fundamentals courses (HPS 5000 series) (Philosophy of Science Stream)
• The balance of the curriculum is arranged in consultation with the student’s faculty instructors and the guidance of the Director of Graduate Studies. Students make choices consistent with a commitment to either a History of Science Stream or a Philosophy of Science Stream.
• Reading knowledge of at least one foreign language relevant to area of interest (normally French or German). Language instruction courses are not counted in the 3.5 FCE required for the degree.
• Full-time MA students normally complete all program requirements in the Fall and Winter sessions. Part-time students must complete all program requirements within five academic years.

Doctor of Philosophy

Minimum Admission Requirements
• General regulations of the School of Graduate Studies.
• One of:
  o a four-year University of Toronto bachelor's degree, or its equivalent 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, or
a University of Toronto master's degree in history and philosophy of science, 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.

Program Requirements
- Students admitted on the basis of a four-year bachelor's degree must complete 6.5 full-course equivalents (FCE).
- Students admitted on the basis of a master's degree in History and Philosophy of Science must take a minimum of 3.0 FCE. A student whose MA degree does not exhibit sufficient breadth is required to take additional courses.
- All students must include at least 0.5 FCE from each of the following three historical periods: pre-renaissance (Classical Antiquity to 1400 A.D.); Renaissance (1400 AD) to end of the eighteenth century; beginning of the nineteenth century to the present. The breadth requirement may be met with courses in either the History of Science Stream or the Philosophy of Science Stream.
- The balance of the student's curriculum is arranged in consultation with the student's faculty instructors and is subject to the overall guidance of the Director of Graduate Studies. Students make choices consistent with a commitment to either a History of Science Stream or a Philosophy of Science Stream.
- Satisfactory reading knowledge of at least two foreign languages relevant to the student's area of interest (normally French and German). Language instruction courses are not counted among the 6.5 FCE required for the PhD.
- Proposal for an extended research paper (required for HPS 2000Y). 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.
- All required courses, including HPS 2000Y, should be completed by the end of the student's second post-bachelor year. In general, all students should 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 HPS 2000Y research paper. Students falling below these standards may be recommended for termination from the program.
- Pass a qualifying examination in areas related to the field of expected research. Examination is conducted by the student's Supervisory Committee, normally three faculty members.
- Thesis proposal approved by the student's thesis Supervisory Committee and the Director of Graduate Studies.

Courses
Not all courses are offered every year. Consult the Institute regarding course offerings.

History and Philosophy of Science and Technology
- HPS 1000Y Individual Reading and Research
- HPS 1001H Individual Reading and Research
- HPS 1002H Individual Reading and Research
- HPS 1003H Individual Reading and Research
- HPS 1004H Individual Reading and Research
- HPS 1005H Historical Topics in Scientific Methodology
- HPS 1006H Historical Introduction to the Sociology of Scientific Knowledge
- HPS 1015H The Scientific Revolution: Galileo to Newton
- HPS 1017H Topics in the History of Physics in the Eighteenth and Nineteenth Centuries
- HPS 1018H,Y Topics in the History of Technology
- HPS 1019H History of Systematics
- HPS 1020H History of Evolutionary Biology
- HPS 1021H The Intellectual Context of Nineteenth-Century Science
- HPS 1022H Religion and Science on Human Sexuality
- HPS 1024H History of Physiology
- HPS 1025H History of Immunology
- HPS 1026H Body, Medicine, and Society in Early Modern Europe
- HPS 1027H Chemistry from Lavoisier to Mendeleev
- HPS 1029H The Invention of Modern Biology
- HPS 1030H Newton and Mechanics
- HPS 1036H History of Engineering
- HPS 1037H Science in Canadian History
- HPS 1038H Topics in the History of Chemistry, 1600-1950
- HPS 1041H History of Medical Microbiology
- HPS 1042H The Biology of Death: Experimental Biology and Experimental Medicine, 1860-1940
- HPS 1043H Science in the Renaissance
- HPS 1044H Biology and Human Nature
- HPS 1045H Human Genetics and the Eugenics Movement
- HPS 1046H Teleology, Adaptation and Design
- HPS 1050H Topics in Ancient Greek and Scientific Revolution Mathematics
- HPS 1052H The Emergence of Modern Mathematics in the Eighteenth and Nineteenth Centuries
- HPS 1060H History of Psychology
- HPS 1101H Philosophy Applied to History of Science
- HPS 1102H Laws of Nature
- HPS 1103H Complexity, Reduction and Emergence in Contemporary Biology
- HPS 1104H Topics in the Philosophy of Science: Models, Truth, and Representation
- HPS 1105H Philosophy of Medicine
Degree Programs

HPS 1106H History and Philosophy of the Social Sciences
HPS 1107H Topics in Philosophy of Science: Empiricism
HPS 1108H Philosophy of Physics
HPS 1109H Philosophy of Probability
HPS 1214H Studies in Ancient and Medieval Science
HPS 1215H Medieval Technology and Society
HPS 1217H Technology and War: 1090-1918
HPS 1500H Research Paper
HPS 2000H Research Paper
HPS 3000H Historiography of Science and Technology
HPS 5001H Fundamentals of the History of Mathematics
HPS 5002H Fundamentals of the History of Physics
HPS 5004H Fundamentals of the History of Chemistry
HPS 5005H Fundamentals of the History of Biology
HPS 5006H Fundamentals of the History of Medicine
HPS 5007H Fundamentals of the History of Technology I
HPS 5008H Fundamentals of the History of Technology II
HPS 5009H Fundamentals of the History of Astronomy
HPS 5010H Fundamentals of the Philosophy of Science
HPS 5011H Fundamentals of the History and Philosophy of Science and Technology
JPH 2192H Philosophy of Science
JPH 2194H Topics in History of 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
BKS 1000Y Book History and Print Culture
BKS 2000H Advanced Seminar in Book History and Print Culture
BKS 2001H Practicum in Book History and Print Culture

Classics
CLA 5013H Studies in Ancient Science

History
HIS 1269H The Social History of Medicine in the Nineteenth and Twentieth Centuries
HIS 1270H History of Psychiatry and Psychiatric Illness
See Department of History entry for more course offerings.

McLuhan Program in Culture and Technology
(C&T courses offered only if there is sufficient enrolment)
C&T 1004H Communications in History, Theory, Technology
C&T 1007H Perspective and Design in the Twentieth Century

Philosophy
PHL 2040H Medieval Philosophy
PHL 2045H Late Medieval Philosophy
PHL 2051H The Rationalists
PHL 2055H The Empiricists
PHL 2057H Seminar in Seventeenth-Eighteenth Century Philosophy
PHL 2062H Kant’s Critique of Pure Reason
PHL 2093H Fege
PHL 2095H Wittgenstein
PHL 2111H Seminar in Epistemology
PHL 2124H Seminar in Logic
PHL 2145H Bioethics
PHL 2190H Philosophy of Language
PHL 2195H Philosophy of Biology
PHL 2196H Topics in the Philosophy of Science
PHL 2199H Seminar in the Philosophy of Science

Graduate Faculty

Full Members
Brian Baigrie - BA, MA, PhD
Joseph Berkovitz - BSc, MA, PhD
James Brown - BA, MA, PhD
Anjan Chakravartty - BSc, MA, MPhil, PhD (Coordinator of Graduate Studies)
Michael Chazan - BA, MA, PhD
Lucia Dacone - PhD, MPhil, BA
Yiftach Fehige - Diploma in Theology, MA, PhD
Craig Fraser - BA, MA, PhD
Brendan Gillon - BA, MA, MA, PhD
Yves Gingras - BSc, MSc, PhD
Nicholas Griffin - BA, PhD
Bert Hall - BA, PhD
James Hull - BSc, MA, PhD
Ingrid Hehmeyer - MSc, MSc, PhD
Alexander Jones - BA, PhD, FRSC
Nikolai Kremensov - Candidate of Sciences
Janis Langins - BEng, MA, MEng, PhD
Bernard Lightman - BA, MA, PhD
Mohan Matthen - BSc, MA, PhD, Canada Research Chair
Margaret Morrison - BA, MA, PhD
Michelle Murphy - BA, PhD
Mark Rosenberg - BA, MSc, PhD
Jan Sapp - BSc, MSc, PhD
William Edward Seager - BA, MA, PhD
Edward Shorter - BA, MA, PhD, FRSC
Ingrid Stefanovic - BA, MA, PhD
Paul Thompson - BA, MA, PhD (Director)
Rose Edward Upshur - MA, MD, MSc, FRCP(C)
Maria Vicedo Castello - BA, MA, PhD, PhD
Faith Wallis - PhD, MLS, MA, BA
Denis Walsh - BSc, PhD, BA, MPhil, PhD, Canada Research Chair
David Wolfe - BA, MA, PhD
Chen-Pang Yeang - PhD, ScD, SM, BS
Suzanne Zeller - BA, MA, PhD

+Extended course. For academic reasons, course work is extended into session following academic session in which course is offered.
Members Emeriti
Edward Barbeau - BA, MA, PhD
Ronald De Sousa - BA, PhD, FRSC
Daniel Goldstick - BA, BPhil, DPhil
Trevor Levere - BA, MA, DPhil, DLitt, FRSC
Pauline Mazumdar - MSc, MD, PhD
Alasdair Urquhart - MA, PhD
Mary Winsor - AB, MPh, PhD

Associate Members
Mark Solovey - BA, MA, MA, PhD
Degree Programs

Human Development and Applied Psychology  HDP

Faculty Affiliation
Ontario Institute for Studies in Education

Degree Programs Offered
Child Study and Education - MA
Developmental Psychology and Education - MA, MEd, PhD
School and Clinical Child Psychology - MA, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Developmental Science, see p. 434
   • Developmental Psychology and Education, MA, PhD
   • School and Clinical Child Psychology, MA, PhD
2. Neuroscience, see p. 466
   • Developmental Psychology and Education, MA, PhD
   • School and Clinical Child Psychology, MA, PhD

Overview
The Department of Human Development and Applied Psychology currently offers three graduate programs:
1. Child Study and Education
2. Developmental Psychology and Education
3. School and Clinical Child Psychology
   Consult the OISE/UT Bulletin for further details of all graduate programs, including admission requirements, program requirements, and descriptions of programs as well as for information about financial support for students.

Students may begin the MEd program in Developmental Psychology and Education in September, January, or July, but all other programs in the Department commence in September.

Note: The department strongly discourages student requests to transfer between programs.

Contact and Address
Web: hdap.oise.utoronto.ca
Telephone: (416) 978-0917
Fax: (416) 926-4713

Department of Human Development and Applied Psychology
The Ontario Institute for Studies in Education of the University of Toronto (OISE/UT)
252 Bloor Street West
Toronto, Ontario M5S 1V6
Canada

Degree Programs

Child Study and Education
The MA in Child Study and Education program is offered at the Institute of Child Study (ICS), a centre of professional teacher training and research in childhood and education, which includes a Nursery through Grade 6 Laboratory School. Eligible graduates are recommended to the Ontario College of Teachers for an Ontario Teachers Certificate of Qualification, which qualifies the holder to teach in the primary and junior divisions of Ontario schools. Graduates are also recommended for Part 1 of the three-part qualification in Primary Education and are eligible for Part 2 of the three-part qualification in Primary Education following one year's successful teaching experience.

The philosophy of the 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 and learning environments result in educational practices that build on children's current levels of development.

Master of Arts

Minimum Admission Requirements
• Undergraduate studies equivalent to a University of Toronto four-year bachelor's degree with a 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.

Program Requirements
• Two years of full-time study. 8.0 full-course equivalents (FCE), including practicum placements and an internship as follows.
  • Year 1
    o HDP 2200Y Child Study: Observation, Evaluation, Reporting, and Research
    o HDP 2201H Childhood Education Seminar I
    o HDP2220H Teaching Practicum
    o HDP 2210Y Introduction to Curriculum I: Core Areas
    o 1.0 elective FCE (equivalent to two half-courses)
    o Four 6-week half-day placements in kindergarten/early childhood, Grade 1-3, and Grade 4-6. A fifth placement is optional for those who would like more experience.
Registration in Year 2 of the program is contingent on successful completion of all Year 1 work.

- **Year 2**
  - HDP 2211H Theory and Curriculum I: Language and Literacy
  - HDP 2212H Theory and Curriculum II: Mathematics
  - HDP 2214H Introduction to Curriculum II: Special Areas
  - 0.5 elective FCE. During the internship session of Year 2, students are required to take HDP 2221Y Advanced Teaching Practicum, HDP 2202H Childhood Education Seminar II: Advanced Teaching, and 0.5 elective FCE
  - 3.5 month full-time internship in an elementary classroom

In both years, electives may be chosen from among master’s level courses in the Department of Human Development and Applied Psychology and, in some cases, other departments. Elective courses that are especially recommended to students are listed in the Human Development and Applied Psychology Program Guidelines.

Students wishing to qualify for Part 1 of the three-part qualification in Special Education complete at least one 6-week placement in a special education setting and take course HDP 2280H Introduction to Special Education and Adaptive Instruction, HDP 2292H Assessment for Instruction, or another special education course approved by their advisor.

Students planning further graduate study in the foreseeable future are advised to undertake a Qualifying Research Paper (QRP) normally under the supervision of a qualified ICS faculty member.

### Developmental Psychology and Education

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. 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 and PhD programs are designed for students wishing to pursue an academic or research-based career. The MEd program is designed for the reflective teacher or other practitioner in education or related fields.

### Master of Arts

#### Minimum Admission Requirements

- Preparation equivalent to a University of Toronto four-year bachelor’s degree with A- or better. Although most applicants will have a degree in Psychology, applicants with a four-year bachelor’s degree in another discipline relevant to their specific program of study are also eligible to apply for admission.
- In addition to the required letters of recommendation, applicants are requested to submit a second academic letter of recommendation.

#### Program Requirements

- The MA program is normally undertaken on a full-time basis and completed in one year.
- 3.0 full-course equivalents (FCE) plus a thesis. Courses should be chosen in consultation with the advisor.
  - HDP 1209H Research Methods and Thesis Preparation in Human Development and Applied Psychology
  - HDP 1288H Intermediate Statistics and Research Design
  - HDP 2252H Individual Reading and Research in Human Development and Applied Psychology: Master’s Level
  - Additional courses from the M.A. required courses listed in the Departmental Guidelines menu
  - Students who have not had a previous course in human development are required to take HDP 1201H Child and Adolescent Development or an equivalent.
  - In addition to their 3.0 FCE. Students who have not had a previous course in statistics are required to take HDP 1287 (Introduction to Applied Statistics) or an equivalent in addition to their 3.0 FCE.

### Master of Education

#### Minimum Admission Requirements

- Admission to the MEd program normally requires preparation equivalent to a University of Toronto four-year bachelor’s degree with standing equivalent to a University of Toronto mid-B or better.
- Applicants normally possess a teaching certificate and have one year of relevant professional experience.

#### Program Requirements

- The MEd program may be undertaken on a full-time or part-time basis. The length of time required to complete the program will vary depending on full-time or part-time status.
- 5.0 full-course equivalents (FCE) plus a comprehensive examination
Degree Programs

- **Year 1**
  - HDP 1200H Foundations of Human Development and Education
  - HDP 2293H Interpretation of Educational Research
- 2.0 additional FCE must be selected from the Department Electives list, available on the departmental Web site or in the Human Development and Applied Psychology Program Guidelines.
- Remaining 2.0 FCE 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.
- Students who have not had a previous course in human development are required to take HDP 1201H Child and Adolescent Development or an equivalent, as part of their 5.0 FCE requirement.

**Doctor of Philosophy**

Pending final approval, admission to the EdD will cease and the program will close when there are no more students registered in the program.

**Minimum Admission Requirements**

- University of Toronto master's degree in Developmental Psychology and Education, Educational Psychology, Special Education or the equivalent. The usual admission standard is equivalency to a University of Toronto A- or better in the master's degree. Applicants with a master's degree in other specializations in Adult Education, Applied Psychology, or Curriculum are also eligible to apply for admission, but may have to complete additional courses to fulfill master's level requirements.
- Students who have not done a master's thesis will be required to submit a Qualifying Research Paper prior to final admission to the program.

**Program Requirements**

- While students may begin the program on a part-time basis, a minimum of one year of full-time study is required. Often students build a leave of absence or sabbatical from their outside employment into their EdD schedule; it is recommended that students use such time to complete the thesis requirement, not course work.
- 4.0 full-course equivalents (FCE), an internship, and a thesis.
  - HDP 3200H Research Proseminar in Human Development and Applied Psychology
  - 0.5 FCE in statistics and research methods from an approved menu
  - At least 1.5 additional FCE from the DPE doctoral program electives list
  - Remaining courses should be chosen in consultation with the student's faculty advisor
  
  A listing of approved statistics and research methods courses as well as DPE doctoral program electives is available on the department's Web site at hdap.oise.utoronto.ca/pages/dpe_phd.html and in the Human Development and Applied Psychology Program Guidelines.

**Doctor of Philosophy**

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.

**Minimum Admission Requirements**

- normally preparation equivalent to a relevant University of Toronto four-year 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 may be eligible to apply for admission, but may have to complete additional courses to fulfill master's level requirements equivalent to the Master of Arts in Developmental Psychology and Education. Students who have not completed a master's thesis will be required to submit a Qualifying Research Paper 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. However, in addition, applicants to the flexible-time PhD must indicate in their statement of intent that they are currently in a career related to the proposed field of study, have a desire to continue with their current career, and have the capacity to secure blocks of time to enable concentrated study (e.g., through the employer's leave policy or study incentive system).

**Program Requirements**

- Full-time PhD students must complete their degree within six years. Flexible-time PhD students must complete their degree within eight years. Degree requirements for both programs are the same.
- 3.0 full-course equivalents (FCE), a comprehensive examination, and a thesis. Courses should be chosen in consultation with the faculty advisor.
- **Year 1**
  - HDP 3200H Research Proseminar in Human Development and Applied Psychology
  - 0.5 FCE in statistics from an approved menu
  - 1.0 FCE from the DPE doctoral program menu
  - 1.0 elective FCE
- Students who have an insufficient background in developmental psychology are required to take HDP 1201H Child and Adolescent Development or an equivalent course in addition to their 3.0 FCE requirement. Students who have not taken the equivalent
of HDP 1288H Intermediate Statistics and Research Design are required to take that course in addition to their 3.0 FCE requirement.

School and Clinical Child Psychology
The School and Clinical Child Psychology program is an American Psychological Association (APA) accredited program. It provides theoretical, research, and professional training in preparation for psychological work with children in schools, clinics, private practice, and research settings. The program is designed to provide training in assessment, therapy, and other psychosocial and instructional interventions, professional consultation and prevention. The degrees are also intended to meet the academic requirements for registration as a psychological associate (MA) or psychologist (PhD). Opportunities are available for research and clinical work with infants, young children, adolescents, and families. The program follows the scientist-practitioner model for psychological training recommended by the APA. Emphasis on designing, conducting, and interpreting scientific research parallels emphasis on exemplary clinical practice.

Master of Arts
Minimum Admission Requirements
- normally a four-year bachelor's degree in Psychology, or its equivalent, defined as 6.0 full-course equivalents (FCE) 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 level) and at least 3.0 FCE at the 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.

Program Requirements
- The program is undertaken on a full-time basis and normally takes two years to complete.
- 5.0 full-course equivalents (FCE) (including a practicum course) and a thesis.
  - HDP 1215H Psychological Assessment of School-Aged Children
  - HDP 1216H Psychoeducational Assessment
  - HDP 1218H Seminar and Practicum in Assessment
  - HDP 1219H Ethical Issues in Applied Psychology
  - HDP 1220H Introduction to School and Clinical Child Psychology
  - HDP 1236H Developmental Psychopathology
  - HDP 1285H Psychology and Education of Children with Learning Disabilities
  - HDP 1288H Intermediate Statistics and Research Design
  - 0.5 FCE in cognitive/affective bases of behaviour from an approved course listing. A listing of approved cognitive/affective bases of behaviour courses is available on the department Web site at hdap.oise.utoronto.ca/pages/scsipma.html, and in the Human Development and Applied Psychology Program Guidelines.
  - 0.5 elective FCE.
  - The practicum portion of HDP 1218H consists of 250 hours (one day a week from September to June) and is normally taken in a school setting.
  - In addition, students will be required to take HDP 1201H Childhood and Adolescent Development and HDP 1287H Introduction to Applied Statistics, if equivalent courses have not been taken previously.
  - Students must achieve a minimum of A- in at least one of HDP 1215H Psychological Assessment of School-Aged Children and HDP 1216H Psychoeducational Assessment and must pass HDP 1218H Seminar and Practicum in Assessment and Intervention with Children 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.

Doctor of Philosophy
Minimum Admission Requirements
- normally a four-year bachelor's degree in Psychology or its equivalent and an OISE/UT MA in SCCP 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 OISE/UT MA in School and Clinical Child Psychology, the student will be required to take additional courses to receive equivalent training.

Program Requirements
- The program is undertaken on a full-time basis and normally takes four to five years to complete.
- 5.0 full-course equivalents FCE (including a doctoral practicum course and an internship course), a comprehensive examination, and a doctoral dissertation.
  - HDP 3222Y Approaches to Psychotherapy Across the Lifespan
  - HDP 3241H Seminar and Practicum in Assessment and Intervention with Children (normally taken in Year 2 of the program)
  - HDP 3242Y Internship in School and Clinical Child Psychology
  - 0.5 FCE from each of the following menus: Psychosocial Interventions, Instructional Interventions, Advanced Assessment, Social Bases of Behaviour, and Biological Bases of Behaviour. A listing of courses in these menus is available on the department Web site at hdap.oise.utoronto.ca/pages/scsiphd.html
and in the Human Development and Applied Psychology Program Guidelines.

- The practicum portion of HDP 3241H consists of 500 hours (two days a week from September to June) and is normally taken in a clinical setting.
- The internship (HDP 3242Y) consists of a 1600 hour placement, normally taken on a full-time basis over the course of a year near the end of the student's program.

- Students must have successfully completed all course work, passed the comprehensive examination, and have their dissertation completed or well underway, prior to commencing their internship.
- In addition, students will be required to take HDP 1201H Childhood and Adolescent Development, HDP 1287H Introduction to Applied Statistics, and HDP 3204H Contemporary History and Systems in Human Development and Applied Psychology, if equivalent courses have not been taken previously.
- Students must achieve a minimum of A- in at least one of HDP 1215H Psychological Assessment of School-Aged Children and HDP 1216H Psychoeducational Assessment and must pass HDP 1218H Seminar and Practicum in Assessment and Intervention with Children 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.

Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDP 1200H</td>
<td>Foundations of Human Development and Education</td>
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<tr>
<td>HDP 1201H</td>
<td>Child and Adolescent Development</td>
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<tr>
<td>HDP 1209H</td>
<td>Research Methods and Thesis Preparation in Human Development and Applied Psychology</td>
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<tr>
<td>HDP 1211H</td>
<td>Psychological Foundations of Early Development and Education</td>
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<tr>
<td>HDP 1215H</td>
<td>Psychological Assessment of School-Aged Children</td>
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<tr>
<td>HDP 1216H</td>
<td>Psychoeducational Assessment</td>
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<tr>
<td>HDP 1217H</td>
<td>Foundations of Proactive Behavioural and Cognitive-Behavioural Intervention with Children</td>
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<tr>
<td>HDP 1218H</td>
<td>Seminar and Practicum in Assessment</td>
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<tr>
<td>HDP 1219H</td>
<td>Ethical Issues in Applied Psychology</td>
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<tr>
<td>HDP 1220H</td>
<td>Introduction to School and Clinical Child Psychology</td>
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<tr>
<td>HDP 1234H</td>
<td>Foundations of Cognitive Science</td>
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<tr>
<td>HDP 1236H</td>
<td>Developmental Psychopathology</td>
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<tr>
<td>HDP 1237H</td>
<td>Development and Learning</td>
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<tr>
<td>HDP 1238H</td>
<td>Special Topics in Human Development and Applied Psychology</td>
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<tr>
<td>HDP 1241H</td>
<td>Outcomes of Early Education and Child Care</td>
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<tr>
<td>HDP 1256H</td>
<td>Child Abuse: Intervention and Prevention</td>
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<tr>
<td>HDP 1259H</td>
<td>Child and Family Relationships—Implications for Education</td>
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<tr>
<td>HDP 1260H</td>
<td>Children, Psychology and the Law</td>
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<tr>
<td>HDP 1265H</td>
<td>Advanced Topics in Social and Personality Development</td>
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<tr>
<td>HDP 1272H</td>
<td>Play and Education</td>
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<td>HDP 1279H</td>
<td>Preventative Interventions for Children at Risk</td>
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<td>HDP 1284H</td>
<td>Psychology and Education of Children and Adolescents with Behaviour Disorders</td>
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<tr>
<td>HDP 1285H</td>
<td>Psychology and Education of Children with Learning Disabilities</td>
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<tr>
<td>HDP 1287H</td>
<td>Introduction to Applied Statistics</td>
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<tr>
<td>HDP 1288H</td>
<td>Intermediate Statistics and Research Design</td>
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<tr>
<td>HDP 1289H</td>
<td>Multivariate Analysis with Applications</td>
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<tr>
<td>HDP 1291H</td>
<td>Casual Inference and Structural Equation Modelling</td>
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<td>HDP 1292H</td>
<td>Test Theory</td>
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<td>HDP 1293H</td>
<td>Applied Research Design and Data Analysis</td>
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<td>HDP 1299H</td>
<td>Language Acquisition and Development</td>
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<td>HDP 2200Y</td>
<td>Child Study: Observation, Evaluation, Reporting, and Research</td>
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<td>HDP 2201H</td>
<td>Childhood Education Seminar</td>
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<td>HDP 2202H</td>
<td>Childhood Education Seminar II: Advanced Teaching</td>
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<td>HDP 2210Y</td>
<td>Introduction to Curriculum I: Core Areas</td>
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<td>HDP 2211H</td>
<td>Theory and Curriculum I: Language and Literacy</td>
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<td>HDP 2212H</td>
<td>Theory and Curriculum II: Mathematics</td>
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<td>HDP 2214H</td>
<td>Introduction to Curriculum II: Special Areas</td>
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<tr>
<td>HDP 2220H</td>
<td>Teaching Practicum</td>
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<tr>
<td>HDP 2221Y</td>
<td>Advanced Teaching Practicum</td>
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<tr>
<td>HDP 2275H</td>
<td>Technology for Adaptive Instruction and Special Education</td>
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<tr>
<td>HDP 2280H</td>
<td>Introduction to Special Education and Adaptive Instruction</td>
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<tr>
<td>HDP 2283H</td>
<td>Psychology and Education of Gifted Children and Adolescents</td>
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<tr>
<td>HDP 2287H</td>
<td>Classroom-Based Counselling Approaches</td>
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<tr>
<td>HDP 2288H</td>
<td>Reflective Teaching and Analysis of Instruction</td>
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<tr>
<td>HDP 2292H</td>
<td>Assessment for Instruction</td>
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<tr>
<td>HDP 2293H</td>
<td>Interpretation of Educational Research</td>
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<tr>
<td>HDP 2296H</td>
<td>Reading and Writing Difficulties</td>
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<tr>
<td>HDP 3200H</td>
<td>Research Proseminar in Human Development and Applied Psychology</td>
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<tr>
<td>HDP 3201H</td>
<td>Qualitative Research Methods in Human Development and Applied Psychology</td>
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<tr>
<td>HDP 3203H</td>
<td>Children's Theory of Mind</td>
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<tr>
<td>HDP 3204H</td>
<td>Contemporary History and Systems in Human Development and Applied Psychology</td>
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<tr>
<td>HDP 3205H</td>
<td>Social and Moral Development</td>
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<tr>
<td>HDP 3209H</td>
<td>Psychology of Language and Literacy</td>
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<tr>
<td>HDP 3211H</td>
<td>Cross-Cultural Perspectives on Children's Problems</td>
</tr>
<tr>
<td>HDP 3222Y</td>
<td>Approaches to Psychotherapy Across the Lifespan</td>
</tr>
</tbody>
</table>
HDP 3224H Advanced Proactive Behavioural and Cognitive-Behavioural Interventions
HDP 3225H Developmental Trajectories and High Risk Environments
HDP 3226H Research Methods and Doctoral Thesis Preparation in Human Development and Applied Psychology
HDP 3227H Multi-Level Modelling in Social Scientific and Educational Research
HDP 3228H Cognition and Emotion in Development
HDP 3229H Understanding Narrative
HDP 3230H Psychodynamic Bases of Therapy
HDP 3231H Special Topics in Human Development and Applied Psychology
HDP 3232H Advanced Social and Emotional Assessment Techniques
HDP 3233H Internship in School and Clinical Child Psychology
HDP 3234H Systemic Family Therapy
HDP 3235H Developmental Neurobiology
HDP 3236H Advanced Psychoeducational Assessment and Psychodiagnosis
HDP 3237H Biological and Psychological Foundations of Low Incidence Disorders
HDP 3238H Assessment and Programming for Reading and Writing Difficulties
HDP 3239H Research and Theories of Reading Disability
HDP 3240H Assessment and Intervention in Multicultural/Bilingual Contexts
JDS 1233H Cognitive Development and Applications
JDS 1249H Social-emotional Development and Applications
JDS 3000H Advanced Methods in Developmental Science
JHC 1251H Reading in a Second Language
JPP 1001H Parenting: Multidisciplinary Perspectives

Individual Reading and Research Courses
HDP 2295H Individual Reading and Research in Adaptive Instruction and Special Education: Master’s Level
HDP 3252H Individual Reading and Research in Human Development and Applied Psychology: Doctoral Level

Graduate Faculty

Full Members
Mary Louise Arnold - BA, MA, EdD
Janet Astington - BA, BSc, MA, PhD
Leslie Atkinson - BA, MA, PhD, CPsych
Andrew Birmiller (Jr) - Professor Emeritus
Ruth Childs - BS, MA, PhD
Nancy Cohen - BSc, MSc, PhD
Carl Corter - BA, PhD, Atkinson Charitable Foundation Chair in Early Child Development and Education
Alister Cumming - BA, MA, PhD
Joseph Ducharme - BA, MA, PhD
Michel Ferrari - BA, MA, PhD
Esther Geva - BA, MA, PhD, CPsych (Chair)
Joan Grusec - BA, PhD
Charles Helwig - BA, PhD
Thomas Humphries - BA, MA, PhD, CPsych
Jennifer Jenkins - BA, MA, PhD, CPsych
Daniel Keating - BA, MA, PhD, Atkinson Charitable Foundation Chair in Early Child Development and Education
Marc Lewis - BA, MA, PhD, CPsych
Chris Moore - BA, PhD
Janette Pelletier - BA, BEd, OTC, MEd, PhD
Michele Peterson-Badali - BA, MA, PhD, CPsych
Joanne Rovet - BSc, PhD
Marlene Scardamalia - BA, MS, PhD
Russell James Schachar - MD, FRCP(C)
Mark Schmuckler - BA, PhD
Katherine Scott - PhD
Keith Stanovich - BA, MA, PhD
Rosemary Tannock - MCSP, BSc(PT), MA, MD, PhD
Richard Volpe - BA, MA, PhD
Judith Wiener - BA, MEd, PhD, CPsych
Dale Willows - BA, MA, PhD, CPsych
David Wolfe - BA, MA, PhD
Richard Wolfe - BA
Earl Woodruff - BSc, BEd, MA, PhD (Associate Chair)
Philip Zelazo - PhD
Kenneth Zucker - BA, MA, PhD, CPsych

Members Emeriti
Carl Bereiter - BA, MA, PhD, LLB
Peter Lindsay - BA, MA, PhD
Solveiga Miezitis - BA, MA, PhD, CPsych
Keith Oatley - BA, PhD
David Olson - BEd, MEd, PhD, University Professor

Associate Members
Leena Augimeri
Nicholas Bala
Ruth Beatty
Patricia Bowers
Jessica Ann Brian - BA, MA, PhD
Alisa Bridgeman (see Kenny)
Arthur Caspary - BSC, MSC, PHD
Xi Chen - BA, MA, MEd, PhD
Valerie Copping
Laurie Costaris

Courses which may continue over a program. The course is graded when completed.
+Extended course. For academic reasons, course work is extended into session following academic session in which course is offered.
Degree Programs

Michelle Eidlitz-Neufeld
Alice Eriks-Brophy - MSc, PhD
William Fagan
Olesya Falenchuk
Rena Helms-Park - BA, MA, PhD, TESL
Joanna Henderson
Guanglei Hong
Alisa Kenny - BA, MA, PhD
Patrick Lee
Nancy Link - BA, MA, PhD, CPsych
Katharina Manassis-Krumma - MD, Dip Psy
Rhonda Martinussen
Cynthia McCall
Ronald Mcier
Jamie Metsala
John Morgan
Rick Morris
Joan Moss
Michael Mueller - BA, MA, PhD
Jack Newman
James Parker
Michal Perlman - BA, MSc, PhD
Nitza Perlman - BA, MSc, PhD
Josef Perner
Adrienne Perry - BA, MA, PhD
Joan Peskin - BA, MA, PhD
Gary Redcliffe - BA, MA, PhD
Sidney Segalowitz - BA, PhD
Greg Siegle
Victoria Talwar
Anthony Toneatto - PhD
Catherine Watson - BA, MEd, PhD
Pamela Wilansky-Traynor - BSc, MA, PhD
Helen Xiaoyan Wu - BA, MA, PhD
**Immunology** IMM

**Faculty Affiliation**
Medicine

**Degree Programs Offered**
**Immunology** – MSc, PhD

**Collaborative Programs Offered**
Degree programs that participate in:
1. Developmental Biology, see p. 433
   - Immunology, PhD
2. Women’s Health, see p. 478
   - Immunology, MSc, PhD

**Overview**
The Department of Immunology provides a common forum for investigators in many areas of the University and an interdisciplinary research experience in immunology. Members and students in the department are located at the Medical Sciences Building, at the Ontario Cancer Institute, and at the Research Institutes of Mt. Sinai Hospital, Toronto General Hospital, Toronto Western Hospital, The Hospital for Sick Children, and Sunnybrook Hospital.

The department offers study programs towards the Master of Science and Doctor of Philosophy degrees in a wide range of immunological disciplines. These disciplines include molecular mechanisms of lymphocyte development and selection, T-cell and B-cell receptors, cell interactions, growth factor receptors, cytokine networks, antigen processing and presentation, signal transduction in lymphocytes, V(D)J recombination, anergy, apoptosis, transgenic and knock-out models, immuno-targeting and vaccine design, autoimmunity, AIDS, diabetes, and transplantation.

For more detailed information, see the graduate handbook available from the department or consult the Immunology home page on the Web site listed below.

**Contact and Address**
Web: www.immunology.utoronto.ca
E-mail: graduate.immunology@utoronto.ca
Telephone: (416) 978-6382
Fax: (416) 978-1938

Department of Immunology
Room 5271, Medical Sciences Building
University of Toronto
Toronto, Ontario M5S 1A8
Canada

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**Degree Programs**

**Master of Science**

**Minimum Admission Requirements**
- Four-year B.Sc., 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 course work necessary for their research.
- Applicants from outside North America are required to provide GRE (general) scores with their application.

**Program Requirements**
- Successful completion of IMM 1016H, IMM 1019H and IMM 2021H.
- A satisfactory thesis embodying the student’s research.
- Pass an oral examination based on research.

**Doctor of Philosophy**

**Minimum Admission Requirements**

<table>
<thead>
<tr>
<th>Admission Routes to the PhD Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicants may be accepted for <strong>direct entry with a B.Sc. degree</strong>, or equivalent, with at least an A- average in their final year.</td>
</tr>
<tr>
<td>Applicants may be accepted first into the MSc program from a bachelor’s program with at least a B+ average and, conditional on excellent performance in the first year, may <strong>reclassify into the PhD program</strong>.</td>
</tr>
<tr>
<td>Applicants already holding an MSc with at least a B+ average may be accepted directly into the PhD program.</td>
</tr>
</tbody>
</table>

**Program Requirements**

- The PhD program emphasizes research. In addition, the program requirements include completion of IMM 1016H, IMM 1017H, IMM 1100H, IMM 2100H, and an additional 0.5 full-course equivalent (FCE) from either Immunology or outside the department in a subject relevant to the thesis topic.
- Students are required to be on campus and participating full-time until the program requirements of research and course work have been completed.
- All students are examined on a submitted research proposal and on relevant course material.
- Candidate must submit a thesis and defend it at an oral examination conducted by the School of Graduate Studies.
Degree Programs

Courses
Not all courses are offered every year. Please consult the department for details.

IMM 1016H Recent Advances in Basic Immunology: Part I (Fall)
IMM 1017H+ Recent Advances in Basic Immunology: Part II (Spring)
IMM 1019H+ Master's Seminar Course (Credit/No Credit)
IMM 1020H Recent Advances in Clinical Immunology (Spring)
IMM 1100H+ Doctoral Seminar Course (Credit/No Credit)
IMM 1429H Developmental Immunology (Fall)
IMM 1430H Advanced Immunobiology (Spring)
IMM 2021H+ Special Topics in Immunology I (Credit/No Credit)
IMM 2100H+ Special Topics in Immunology II (Credit/No Credit)
JBI 1428H Molecular Immunology (Fall)

Graduate Faculty

Full Members
Michele Anderson - BSc, PhD
Brian Barber - BSc, MSc, PhD
Stuart Berger - BSc, MSc, PhD (Coordinator of Graduate Studies)
Neil Berinstein - MD, FRCP(C)
James Booth - BSc, PhD
James Carlyle - BSc, PhD
Amos Cohen - BSc, MSc, PhD
Jayne Danska - AB, PhD
Hans Dosch - BSc, MD
Eleanor Fish - BSc, MPhil, PhD
Jennifer Gommerman - BSc, PhD
Reginald Gorczynski - BA, BSc, MD, PhD
Cynthia Guidos - BSc, PhD
Razqallah Hakem - PhD
Robert Inman - BA, MD, FRCP
Norman Iscove - MD, PhD
David Isenman - BSc, PhD
Jan Jongstra - MSc, PhD
Michael Julius - BSc, PhD
David Kelvin - MSc, PhD
Michelle Letarte - BSc, PhD
Gary Levy - BSc, MD, FRCP, FRCP(C)
Susanna Lewis - BSc, PhD
Kelly MacDonald - MD, FRCP(C)
Tak Mak - BSc, MSc, PhD, DSc, FRS, FRSC, University Professor, Canada Research Chair
Alberto Martin - BSc, MSc, PhD

Pam Ohashi - BSc, PhD
Mario Ostrowski - MD, FRCP(C), specialist in infectious diseases
Christopher Paige - BSc, PhD, The Ronald N Buick Chair in Cancer Research
Jofel Penninger - MD, PhD, Canada Research Chair
Philippe Poussier - MD
Michael Ratcliffe - BSc, PhD (Chair)
John Roder - BA, PhD, Canada Research Chair
Chaim Reifman - MD, FRCP
Robert Rottapel - BA, MA, MD
Laurence Rubin - MD, FRCP
Andre Schuh - BSc, MD, FRCP(C)
Earl Silverman - MD, FRCP
Katherine Siminovitch - MD, FRCP(C)
Florence Tsui - BSc, MSc, PhD
Tania Watts - BSc, PhD
David Williams - BSc, MSc, PhD
Joan Wither - BSc, MD, PhD, FRCP
Gillian Wu - BSc, MSc, PhD
Rae Yeung - MD, PhD, FRCP(C)
Li Zhang - MD, MSc, PhD
Juan Carlos Zuniga-Pflucker - BSc, PhD

Members Emeriti
John Hay - BSc, MSc, PhD
Robert Painter - BSc, PhD
Marc Shulman - AB, PhD

Associate Members
Jenny Jongstra-Bilen - BSc, MSc, PhD
Edward Keystone - BSc, MD, FRCP(C)
Dana Philpott - BSc, PhD
Jonathan Rast - BS, MS, PhD

Courses which may continue over a program. The course is graded when completed.
+Extended course. For academic reasons, course work is extended into session following academic session in which course is offered.
Industrial Relations and Human Resources  IRE

Degree Programs

Faculty Affiliation
School of Graduate Studies

Degree Programs Offered
Industrial Relations and Human Resources – MIRHR, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Ethnic and Pluralism Studies, see p. 445
   • Industrial Relations and Human Resources – MIRHR, PhD

Overview
The Master of Industrial Relations and Human Resources (MIRHR) and Doctor of Philosophy (PhD) degree programs benefit 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 degree may be taken on a full-time or part-time basis.

The MIRHR is a professional degree program designed to train students in the latest innovations and best practices within industrial relations, human resources management and labour market analysis. The degree provides specialized study of the employment relationship using an interdisciplinary approach. Integral to the MIRHR degree is training in the essential analytical, research and interpersonal skills required of the effective industrial relations professional.

The PhD in Industrial Relations and Human Resources 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 fulfill a two-year residency requirement that enables their full participation in the activities associated with the program.

Degree Programs

Master of Industrial Relations and Human Resources

Minimum Admission Requirements
• Applicants to the two-year MIRHR program require an appropriate four-year University of Toronto bachelor's degree, or its equivalent from a recognized university. A minimum grade average of B+ (77%) in each of the final two years of the degree is required.
• Applicants to the 12-month MIRHR advanced standing option require an appropriate four-year University of Toronto bachelor's degree, or its equivalent from a recognized university. The degree major or specialization must be in one of the following areas: employment relations; industrial relations; labour studies; or administration or commerce with a major in industrial relations or human resources. A minimum grade average of B+ (77%) in each of the final two years of the degree is required.
• Applicants whose degrees are not from Canadian universities are required to submit results from the Graduate Record Examination (GRE). The Graduate Management Admission Test (GMAT) scores will be accepted as a substitute. Although there is no minimum score requirement, performance on either the GRE or GMAT 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). The following minimum scores are acceptable:
   o Paper-based TOEFL exam: 600 and 5 on the TWE
   o Computer-based TOEFL exam: 250 and 5 on the essay rating component
   o Internet-based TOEFL exam: 100/120 and 22/30 on the writing and speaking sections
• Note: Due to space limitations, applicants meeting the minimum admission requirements are not guaranteed admission. Applicants are evaluated on their individual merits; the Centre for Industrial Relations and Human Resources reserves the right to select qualified applicants to the program. All admission decisions are final.

Program 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.

Contact and Address
Web: www.chass.utoronto.ca/cir
Fax: (416) 978-5696
Telephone: (416) 978-2927
E-mail: cir.info@chass.utoronto.ca

Centre for Industrial Relations and Human Resources
121 St. George Street
University of Toronto
Toronto, Ontario M5S 2E8
Canada
Two-Year MIRHR Program
- Year 1 of the two-year program is spent acquiring a foundation in industrial relations and human resources and includes courses in economics, law, quantitative methods, organizational behaviour, and sociology. Courses marked (PR) require prerequisites; further information may be obtained from the Centre.

Year 1: Foundation Courses
Students must take 5.0 full-course equivalents (FCE), of which 4.0 FCE are required courses, as follows:
- IRE 1002H Applied Statistics in Industrial Relations (Exclusion: CRI 2020H Applied Statistics in Criminology)
- IRE 1010H Economic Environment of Industrial Relations and Human Resources
- IRE 1126H Labour Market Policy (PR)
- IRE 1362H Organizational Behaviour (Exclusion: MGT 1362H Managing People in Organizations)
- IRE 1609H Strategic Human Resources Management (Exclusion: MGT 2609H Strategic Human Resources Management)
- IRE 1610H Industrial Relations (Exclusion: MGT 2610H Industrial Relations)
- IRE 1611H Sociology of Industrial Relations

Plus one of the following law courses:
- IRE 1270H Law of Labour Relations
- IRE 1338H Law in the Workplace
  - Courses are chosen from the list of elective courses below to fill the requisite 5.0 FCE in the first year of the program.
  - Students admitted into the two-year MIRHR program may elect to take IRE 4000H, a non-credit course designed to assist students to gain summer employment in a position that will provide them work experience relevant to their field of study.
  - Students in the MIRHR program are required to achieve a mid-B average in the first year of the program (or in the first 5.0 FCE) in order to continue or to pass into Year 2.

Year 2: Core Courses
Students must take 4.0 FCE to complete Year 2. This includes core courses in Industrial Relations and Human Resources (1.5 FCE):
- IRE 2001H Foundations and Current Issues in Industrial Relations and Human Resources (PR)
- IRE 2002Y Research Methods in Industrial Relations and Human Resources (PR)
  - Courses are chosen from the list of elective courses below to fill the requisite 4.0 FCE in the second year of the program.
  - All degree requirements for students in the two-year program must be completed within six years from the date of first enrolment in the MIRHR program.

12-Month MIRHR Program with Advanced Standing Option
- 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-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 7.0 full-course equivalents (FCE), of which 3.5 FCE are required courses, as follows:
  - IRE 1010H Economic Environment of Industrial Relations and Human Resources
  - IRE 1126H Labour Market Policy (PR)
  - IRE 1611H Sociology of Industrial Relations
  - IRE 2001H Foundations and Current Issues in Industrial Relations and Human Resources (PR)
  - IRE 2002Y Research Methods in Industrial Relations and Human Resources (PR)
  - Plus one of the following law courses:
    - IRE 1270H Law of Labour Relations
    - IRE 1338H Law in the Workplace
    - Courses are chosen from the list of elective courses below to fill the requisite 7.0 FCE in the program.
    - Students in the MIRHR program are required to achieve a mid-B average in the first two sessions of the program (or in the first 5.0 FCE) in order to continue into the third session.
    - All degree requirements for students in the advanced standing option must be completed within five years from the date of first enrolment in the MIRHR program.

Doctor of Philosophy
Minimum Admission Requirements
- Students are admitted under the general regulations of the School of Graduate Studies and require a Master of Industrial Relations and Human Resources (MIRHR) degree from the University of Toronto, or its equivalent. Other students who meet the admission requirements may be required to enrol in a preparatory year consisting of courses from the MIRHR program. Students with a bachelor's degree in industrial relations and human resources, or in a related field of study, may be considered for admission to the PhD (direct entry) if they have exceptional academic standing and have demonstrated quantitative skills and research ability.
- 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). The Graduate Management Admission Test (GMAT)
will be accepted as a substitute. Although there is no minimum score requirement, performance on either the GRE or GMAT 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). The following minimum scores are acceptable:
  o Paper-based TOEFL exam: 600 and 5 on the TWE
  o Computer-based TOEFL exam: 250 and 5 on the essay rating component
  o Internet-based TOEFL exam: 100/120 and 22/30 on both the writing and speaking sections
- Applicants may be required to appear for a personal interview and/or submit copies of recent academic work.

Program Requirements

- Requirements that are normally met in the first two years 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 4.5 full-course equivalents (FCE) as follows:
  o The core requirement in Industrial Relations and Human Resources is met by completing:
    o IRE 3004H Special Topics in Employment and Industrial Relations
  o The research and statistics requirements are met by completing:
    o IRE 3002Y Research Seminar I
    o IRE 3003H Research Seminar II (PR)
    o MGT 3062H Methods and Research in Organizational Behaviour and Industrial Relations
    o 1.0 FCE in statistics, chosen, with the approval of the PhD Coordinator, from selected offerings in other departments and faculties.
- In cases where a student’s prior academic background may have covered any of the courses listed above, substitutions may be permitted with the 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.
- A comprehensive examination is normally written by January 31 of the student’s second year in the program.
- Intensive work on the dissertation will also begin in the second year of the PhD program. The thesis topic and name of supervisor must be submitted no later than March 31 of the second year.
- Students who are in their third and fourth years of study must enrol in the following courses:
  o IRE 3005H Workshop in Industrial Relations I (Credit/No Credit)
  o IRE 3006H Workshop in Industrial Relations II (Credit/No Credit)
- Students will have achieved candidacy upon successful completion of the program requirements above at the end of the third year of study (or fourth year for direct entry PhD students).
- Proficiency in French and/or other languages will be required when the student’s supervisor deems it necessary for dissertation research or when the Centre deems it necessary for the student’s field.
- 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.
- All requirements for the degree must be completed within six years from the date of first enrolment in the PhD program.

Courses

Not all courses are offered every year. Please consult the Centre for Industrial Relations and Human Resources timetable which lists available courses in each session.

Elective Courses

The Centre offers key required and elective courses in Industrial Relations and Human Resources. Students take the balance of their courses from those available in other departments and faculties. This range of options enables students to examine the industrial relations field from the perspective of a variety of disciplines.

Due to the multidisciplinary nature of industrial relations, MIRHR students are not permitted to take more than a total of 1.5 FCE electives in any one unit outside the Centre for Industrial Relations and Human Resources without the permission of the Graduate Coordinator. Since outside units normally give preference to their own students, MIRHR 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 the Centre. Since these courses are changed from time to time, students must consult the Centre for current information.

Some courses are offered only in alternate years, and 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.

Courses marked (PR) require prerequisites; additional information may be obtained from the Centre.

Further details concerning specific courses and brief course descriptions are available on the Centre’s Web site.

Industrial Relations and Human Resources

IRE 1270H Law of Labour Relations
IRE 1338H Law in the Workplace
IRE 1615H Labour and Globalization (PR)

(PR) Courses with prerequisites
Degree Programs

**Industrial Relations and Human Resources**

IRE 1620H Labour Relations Problems in Historical Perspective
IRE 1625H Contemporary Issues in Public Sector Labour-Management Relations (PR)
IRE 1630H Negotiation Skills, Theory and Practice (PR)
IRE 1635H Advanced Negotiations: Theory and Process (PR)
IRE 1640H Contemporary Trade Unionism: Issues, Challenges, Strategy (PR)
IRE 1645H Alternative Dispute Resolution in the Workplace: Theory and Practice (PR)
IRE 1650H Designing Systems for Managing Workplace Conflict (PR)
IRE 1715H Special Topics in Industrial Relations and Human Resources: Women in the Workplace
IRE 1720H Managing Organizational Change (PR)
IRE 1725H Cross Cultural Differences in Organizational Contexts
IRE 2021H Accounting Information and Industrial Relations
IRE 2715H Special Topics in Industrial Relations and Human Resources
IRE 3615H Creating High Performance Reward Systems (PR)
IRE 3620H Topics in Compensation (PR)
IRE 3625H Human Resource Research and Information Systems
IRE 3630H Diversity and Inclusiveness in the Workplace
IRE 3635H Compensation
IRE 3640H Recruitment and Selection (PR)
IRE 3645H Training and Development
IRE 3650H Human Resource Planning and Strategy

**Adult Education and Counselling Psychology**

AEC 1101H Program Planning in Adult Education
AEC 1148H An Introduction to Workplace and Organizational Democracy
AEC 1268H Career Counselling and Development: Transition in Adulthood

**Economics**

ECO 2800H Labour Economics I
ECO 2801H Labour Economics II (PR)
ECO 2807H Economics and Demographics (PR)

**Law**

IRE 1260H Seminar on Labour Arbitration (PR) (also LAW 260H)
IRE 1373H Labour Policy (also LAW 373H, JPJ 2042H)

**Management**

MGT 2129H Forecasting Models and Econometric Methods (PR)
MGT 2604H Organization Change and Development (PR)
MGT 2605H International Organizational Behaviour (PR)
MGT 2612H Managing Talent for Global Operations
MGT 2914Y Not-for-Profit Consulting
MGT 2615H Special Topics in Organizational Behaviour
MGT 2804H Multivariate Methods for Management (PR)

**Political Science**

POL 2307H The Political Economy of Technology: from the Auto-Industrial to the Information Age

**Public Health Sciences**

CHL 5904H Perspectives in Occupational Health and Safety—Legal and Social Context

**Social Work**

SWK 4403H Women and Social Policy in Canada

**Sociology**

SOC 6003H Immigration II
SOC 6012H Sociology of Work I
SOC 6112H Sociology of Work II

**Other Elective Courses**

With the approval of the Graduate Coordinator, students may register in the following credit/no credit course:
IRE 4000H Work Term in IR/HRM (Credit/No Credit)

**Reading Courses**

In certain circumstances, and with the approval of the Graduate Coordinator, students may be allowed to take a reading or research course:
IRE 1090H A reading course or individual research in an approved field
IRE 2090H A reading course or individual research in an approved field

**Graduate Faculty**

**Full Members**

Joel Amernic - BSc, MBA, FCA
Michele Campolieti - BSc, MA, PhD
David Foot - BA, AM, PhD
Morley Gunderson - BA, MA, PhD, Canadian Imperial Bank of Commerce (CIBC) Chair in Youth Employment (PhD Coordinator)
D Linn Holness - MHSc, MD
Douglas Hyatt - BA, MA, PhD
Harry Krashinsky - BA, MA, PhD
Michael Krashinsky - BS, MA, MPhil, PhD
Brian A Langille - BA, LLB, BCL
Gary Latham - BA, MS, PhD, FRSC
Carla Lipsig-Mumme - BA, MA, PhD
Laurel MacDowell - BA, MSc, PhD
Patrick Macklem - BA, LLB, LLM
Jack Quarter - BA, MA, PhD

(PR) Courses with prerequisites

232 Industrial Relations and Human Resources
Degree Programs

Frank Reid - BA, MSc, PhD (Director)
Jeffrey Reitz - BS, PhD, FRSC, Robert F Harney
Professor of Ethnic Immigration and Pluralism Studies
Maria Rotundo - BA, MIR, PhD
Alan Saks - BA, MASc, PhD
Anil Verma - BTech, MBA, PhD
Sandy Welsh - BA, MA, PhD
Glen Whyte - LLB, MBA, MPhil, MA, PhD
Jia Lin Xie - BA, MBA, PhD
David Zweig - BA, MASC, PhD

Associate Members
Karen Bentham - BAdmin, MIR, PhD (Coordinator of Graduate Studies)
Brian Burkett - BA, LLB
Eric Cousineau - BA, MBA
Elizabeth Ann Dhuey - BA, MEc, PhD
Blaine Donais - BA, MA, LLB, LLM
Jonathan Eaton - BA, LLB, LLM, PhD
Tony Fang - BA, MA, PhD
Garth Frazer - BMath, BEd, MA, MPhil, PhD
Rafael Gomez - BA, MA, MIR, PhD
Janet Hardy - BA, BEd, MBA
Joanna Heathcote - BA, MA, PhD
Stephen Krashinsky - BA, LLB
Alan Levy - BA, MIR, LLM
John Mastoras - BA, MIR, LLB
Edward Mock - BA, BComm, MIR, PhD
Phanikiran Radhakrishnan - BA, MA, PhD
Kerry Rittich - MusBac, LLB, SJD
Lori Riznek - BA, MA, PhD
Peter Sawchuk - BSc, BEd, MA, PhD
Chris Schenk - BA, MA, PhD
Kristyn Scott - BA, MA, PhD
Sara Silinn - BA, MIR, LLB, PhD
Indira Somwaru - BA, BEd, MBA
Raj Uttamchandani - BSc, MIR, MBA, LLB
Nan Weiner - BSB, MA, PhD
Degree Programs

Information Studies  FIS

Faculty Affiliation
Information Studies

Degree Programs Offered
Information Studies - MIST, Combined JD/MIST, PhD
Museum Studies - MMSt

Diploma Programs Offered
Information Studies - Graduate Diploma of Advanced Study in Information Studies (a post-master's diploma)

Collaborative Programs Offered
These programs provide an opportunity for MIST and doctoral students to pursue a specialized subject interest as part of their degree program. Degree programs that participate in:
1. Addiction Studies, see p. 406
   • Information Studies, MIST, PhD
2. Aging, Palliative and Supportive Care Across the Life Course, see p. 408
   • Information Studies, MIST, PhD
3. Book History and Print Culture, see p. 424
   • Information Studies, MIST, PhD
4. Environmental Studies, see p. 443
   • Information Studies, MIST, PhD
5. Knowledge Media Design, see p. 462
   • Information Studies, MIST, PhD
6. Women and Gender Studies, see p. 473
   • Information Studies, MIST, PhD
7. Women’s Health, see p. 478
   • Information Studies, MIST, PhD

Overview
The Faculty of Information Studies (FIS) combines strengths in the stewardship and curation of cultural heritage (libraries, archives, and museums) with leadership in the future of information practice as society is transformed by the rise of digital technologies.

The two-year Master of Information Studies program allows students to explore the breadth of information, and to focus on one or more areas of interest: library and information science, archival studies, and information systems.

The Combined Juris Doctor/Master of Information Studies program is offered jointly by the Faculty of Law and the Faculty of Information Studies at the University of Toronto. In four years, students receive two degrees, information studies and law.

The Doctor of Philosophy program in information studies provides opportunities for advanced scholarly inquiry into theoretical aspects of information and in the empirical investigations of information in various contexts.

The two-year Master of Museum Studies 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.

Contact and Address
Web: www.fis.utoronto.ca
E-mail: inquire@fis.utoronto.ca
Telephone: (416) 978-3234
Fax: (416) 978-5762

Faculty of Information Studies
140 St. George Street
University of Toronto
Toronto, Ontario M5S 3G6
Canada

Degree Programs

Information Studies

Master of Information Studies

Minimum Admission Requirements
• SGS general regulations. Application deadlines are available on the Faculty of Information Studies Web site.
• Four-year bachelor's degree with at least a B average (3.0 GPA) from a university recognized by the University of Toronto. Generally, successful applicants hold an academic level of B+ (3.3 GPA) or higher in the final year.
• 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 meet current admission requirements and who hold a BLS degree from the University of Toronto, or its equivalent from an approved university, may be admitted to the MIST program with advanced standing. Such students may be required to take additional courses if certain requisite instruction is lacking.
• 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 MIST program may also apply for admission with advanced standing. Each application will be evaluated individually. At least 4.0 full-course equivalents (FCE) towards the MIST 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 facility 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:

1. 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: 100/120 with 25/30 on the speaking section and 27/30 on the writing section.

2. Michigan English Language Assessment Battery (MELAB) with a minimum required score of 95.

3. International English Language Testing System (IELTS) with a minimum required score of 8.0.

4. English Language Diagnosis and Assessment (ELDA)/Certificate of Proficiency in English (COPE) with a minimum required score of 6 and at least 3 in the writing portion.

Program Requirements

- The Faculty expects students to be competent in their use of information technologies.
- 8.0 full-course equivalents (FCE) as follows.
  - Course option: All students must take 1.5 core FCE, 2.0 required FCE in an area of focus, and 2.0 elective FCE at the 2000-level. The remaining 2.5 FCE may be chosen at the student’s discretion.
  - Thesis option: 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. Students must take 1.5 core FCE, 2.0 elective FCE at the 2000-level, and complete a thesis (equivalent to 2.0 elective FCE). Faculty approval is required. The remaining 2.5 FCE may be chosen at the student’s discretion. Students must obtain at least an A- in FIS 1240H Research Methods. 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 MIST.
  - All requirements must be completed satisfactorily within 6 years from first enrolment in the program. Total time from original registration, including lapsed time, is counted as the time allowed to complete the degree requirements.
- Non-Degree Programs (Special Student Status)
  - Special Student status is normally intended for fully qualified graduates who wish to update their knowledge. Programs for Special Students are administered under the general regulations. Details are available on the Faculty of Information Studies Web site. Courses in the PhD program are not open to Special Students.
  - Diploma Program The Graduate Diploma of Advanced Study in Information Studies is a post-master’s diploma. Applicants must have a University of Toronto MIST, MLS or MIS degree or equivalent. The Graduate Diploma requires 24 credit hours (i.e., 4.0 FCE). The graduate Diploma program, which may be taken on a full-time or part-time basis, will be tailored to the individual’s needs and interests with courses selected in consultation with their advisor. Complete details are available on the FIS Web site at www.fis.utoronto.ca.

Combined Juris Doctor/Master of Information Studies

Minimum Admission Requirements

- Applicants must be admitted to both the Faculty of Law and the Faculty of Information Studies; therefore, applicants must satisfy the admission requirements of both faculties independently, and all applicants must complete the Law School Admission Test (LSAT) and all admission requirements of the Faculty of Information Studies. A separate application to each Faculty must also be submitted. Please obtain application information from each Faculty.
- Students who have completed the first year of either the Juris Doctor or the Master of Information Studies program may apply for admission to the combined JD/MISt program by meeting the normal application and admission requirements of the other Faculty and notifying their Faculty Registrar.

Program Requirements

- Students complete the program requirements of the JD and the MISt.
- At the completion of the four-year integrated program, the successful student is awarded both the Juris Doctor and the Master of Information Studies degrees, which, if taken separately, would require five years of study.

Courses

Not all courses are offered every year. Consult the Faculty of Information Studies Web site for the annual course offerings. Course descriptions and details of prerequisites, co-requisites, and permissions are posted on the Information Studies Web site. Inquiries concerning the selection of courses to be offered in any given session should be directed to the Faculty of Information Studies.

FIS 1210H Information and Its Social Contexts
FIS 1230H Management of Information Organizations
FIS 1240H Research Methods
FIS 1310H Information Resources and Services
FIS 1311H Information Technology Applications
FIS 1320H Introduction to Bibliographic Control
FIS 1325H Online Information Retrieval
### Degree Programs

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>FIS 1330H</td>
<td>Archives Concepts and Issues</td>
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<tr>
<td>FIS 1331H</td>
<td>Archival Arrangement and Description</td>
</tr>
<tr>
<td>FIS 1332H</td>
<td>Archives Programs and Services</td>
</tr>
<tr>
<td>FIS 1340H</td>
<td>Introduction to Information Systems</td>
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<tr>
<td>FIS 1341H</td>
<td>Analyzing Information Systems</td>
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<tr>
<td>FIS 1342H</td>
<td>Designing Information Systems</td>
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<tr>
<td>FIS 1343H</td>
<td>Introduction to Database Management and Design</td>
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<tr>
<td>FIS 2010H</td>
<td>Reading Course</td>
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<td>FIS 2011H</td>
<td>Reading Course</td>
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<tr>
<td>FIS 2101H</td>
<td>Information Innovations Design Studio I</td>
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<td>FIS 2120H</td>
<td>Conservation and Preservation of Recorded Information</td>
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<td>FIS 2121H</td>
<td>Specialized Archives</td>
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<td>FIS 2122H</td>
<td>The Public Library in a Diverse Community</td>
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<tr>
<td>FIS 2124H</td>
<td>Surveillance and Identity</td>
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<tr>
<td>FIS 2125H</td>
<td>Information and Culture in a Global Context</td>
</tr>
<tr>
<td>FIS 2126H</td>
<td>Public Library Services to Culturally Diverse Communities</td>
</tr>
<tr>
<td>FIS 2127H</td>
<td>Collection Development, Evaluation, and Management</td>
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<tr>
<td>FIS 2128H</td>
<td>Serials Management</td>
</tr>
<tr>
<td>FIS 2131H</td>
<td>The Literature of the Humanities and Social Sciences</td>
</tr>
<tr>
<td>FIS 2132H</td>
<td>The Literature of Science and Technology</td>
</tr>
<tr>
<td>FIS 2133H</td>
<td>Legal Literature and Librarianship</td>
</tr>
<tr>
<td>FIS 2134H</td>
<td>Business Information Resources</td>
</tr>
<tr>
<td>FIS 2135H</td>
<td>Health Sciences Information Resources</td>
</tr>
<tr>
<td>FIS 2136H</td>
<td>Government Information and Publications</td>
</tr>
<tr>
<td>FIS 2137H</td>
<td>International Organizations: Their Documents and Publications</td>
</tr>
<tr>
<td>FIS 2139H</td>
<td>Young People: Collection Development</td>
</tr>
<tr>
<td>FIS 2140H</td>
<td>Young People: Current and Emerging Information Practices</td>
</tr>
<tr>
<td>FIS 2142H</td>
<td>Theories of Classification and Knowledge Organization</td>
</tr>
<tr>
<td>FIS 2144H</td>
<td>Subject Approach to Information</td>
</tr>
<tr>
<td>FIS 2145H</td>
<td>Creation and Organization of Bibliographic Records</td>
</tr>
<tr>
<td>FIS 2149H</td>
<td>Administrative Decision Making in Information Organizations</td>
</tr>
<tr>
<td>FIS 2150H</td>
<td>Advanced Management of Information Organizations</td>
</tr>
<tr>
<td>FIS 2151H</td>
<td>Human Resources Management in Libraries</td>
</tr>
<tr>
<td>FIS 2152H</td>
<td>Advocacy and Library Issues</td>
</tr>
<tr>
<td>FIS 2153H</td>
<td>Technical Services: Organization and Administration</td>
</tr>
<tr>
<td>FIS 2154H</td>
<td>Reference Services: Organization and Administration</td>
</tr>
<tr>
<td>FIS 2158H</td>
<td>Management of Corporate and Other Special Information Centres</td>
</tr>
<tr>
<td>FIS 2159H</td>
<td>Analytical and Historical Bibliography I</td>
</tr>
<tr>
<td>FIS 2160H</td>
<td>Analytical and Historical Bibliography II</td>
</tr>
<tr>
<td>FIS 2161H</td>
<td>History of Books and Printing</td>
</tr>
<tr>
<td>FIS 2162H</td>
<td>Rare Books and Manuscripts</td>
</tr>
<tr>
<td>FIS 2163H</td>
<td>Research Collections in Canadiana</td>
</tr>
<tr>
<td>FIS 2165H</td>
<td>Social Issues in Information and Communication Technologies</td>
</tr>
<tr>
<td>FIS 2166H</td>
<td>Telecommunications for Information Systems</td>
</tr>
<tr>
<td>FIS 2167H</td>
<td>Community Informatics</td>
</tr>
<tr>
<td>FIS 2168H</td>
<td>Information Retrieval Systems</td>
</tr>
<tr>
<td>FIS 2169H</td>
<td>User-Centred Information Systems Development</td>
</tr>
<tr>
<td>FIS 2171H</td>
<td>Major Subject Heading and Classification Systems</td>
</tr>
<tr>
<td>FIS 2172H</td>
<td>Reader’s Advisory: Reference Work and Resources</td>
</tr>
<tr>
<td>FIS 2173H</td>
<td>Information Professional Practicum</td>
</tr>
<tr>
<td>FIS 2174H</td>
<td>History of Records and Records-Keeping</td>
</tr>
<tr>
<td>FIS 2175H</td>
<td>Managing Organizational Records</td>
</tr>
<tr>
<td>FIS 2176H</td>
<td>Information Management in Organizations—Models and Platforms</td>
</tr>
<tr>
<td>FIS 2177H</td>
<td>Archiving Information, Systems, and Organizations</td>
</tr>
<tr>
<td>FIS 2178H</td>
<td>Designing Electronic Descriptive Tools</td>
</tr>
<tr>
<td>FIS 2179H</td>
<td>Interacting with Information Systems</td>
</tr>
<tr>
<td>FIS 2180H</td>
<td>Archives: Access, Advocacy, and Outreach</td>
</tr>
<tr>
<td>FIS 2181H</td>
<td>Information Policy</td>
</tr>
<tr>
<td>FIS 2182H</td>
<td>Information Visualization</td>
</tr>
<tr>
<td>FIS 2183H</td>
<td>Knowledge Management and Systems</td>
</tr>
<tr>
<td>FIS 2184H</td>
<td>Appraisal for Records Retention and Archives Acquisition</td>
</tr>
<tr>
<td>FIS 2185H</td>
<td>Database Techniques for Managing Structured Documents</td>
</tr>
<tr>
<td>FIS 2186H</td>
<td>Metadata Schemas and Applications</td>
</tr>
<tr>
<td>FIS 2300H</td>
<td>Special Topics in Information Studies</td>
</tr>
</tbody>
</table>

### Doctor of Philosophy

**Minimum Admission Requirements**

- Average of at least B+ in a four-year University of Toronto bachelor's degree program, or its equivalent, and an average of at least B+ in a University of Toronto master's degree program, or its 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 2 or 3 semesters, or by completing 5.0 to 7.5 full-course equivalents (FCE), will normally be required to take additional courses in the MISt program.

- The major subject for doctoral study proposed by the applicant must be supported by relevant courses taken at the master's level, including appropriate courses in research methods and statistics; an applicant may be required to take make-up courses to obtain this support.

- Admission is limited to graduates of high intellectual ability who have an interest in research. Evaluation of applicants is based on academic records and three academic letters of reference. A personal interview may be requested.

- Admission is limited to graduates of high intellectual ability who have an interest in research. Evaluation of applicants is based on academic records and three academic letters of reference. A personal interview may be requested.

- Applicants whose first language is not English should consult the English Language Facility section of the Faculty's calendar.

- Admission procedures are described in the General Regulations section of this calendar.

- Doctoral students are admitted in September. Meeting the minimum requirements of FIS and of SGS does not guarantee admission.
Program Requirements

- Since PhD students have different backgrounds and areas of interest, programs are developed on an individual basis. The focus of each program enables the student to achieve satisfactory standards of competence in major and minor areas of study in order to carry out the research and writing of the thesis. The program of study developed by the student in conjunction with the faculty advisor must be approved by the FIS Committee on Standing and by SGS.

- In Phase 1, students are required to complete:
  - a major subject, FIS 3004Y Advanced Topics in Information Studies
  - a minor subject
  - FIS 3005Y Advanced Seminar in Research Methodologies
  - a Determination of Research Readiness (written and oral)
  - a thesis
  - a final oral examination
  - Students are expected to participate in the Colloquium Series of the Faculty and in other research events.
  - Other courses appropriate for the student’s research may also be required.

- In Phase 2 students focus on the choice and development of the thesis topic and research for the thesis.

Full-time PhD Program

The PhD program is designed to be completed within four years of first enrolment in the program. All requirements must be completed within six years from first enrolment. PhD students must be regularly registered in SGS during each year of the program.

Flexible-time PhD Program

The flexible-time PhD program is intended for practising professionals whose employment is related to their intended field of research interest. The flexible-time PhD differs from the full-time PhD only in design and delivery, not in requirements. Students must 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. Degree requirements are designed to be completed within eight years of first enrolment in the program.

Courses

- FIS 3004Y+ Advanced Topics in Information Studies
- FIS 3005Y Advanced Seminar in Research Methodologies

Museum Studies

Master of Museum Studies

Minimum Admission Requirements

- Four-year BA or BSc with an overall average grade of at least B+, or equivalent from a recognized university.
- Applicants must satisfy the Museum Studies program that they are capable of independent research in museum studies at an advanced level. Demonstrated previous experience in museums or related cultural organizations will also be considered. Admission to this program is competitive.
- One official transcript of the applicant’s academic record from each university attended, complete to the time of application.
- A letter of intent (maximum 500 words), indicating areas of interest and experience in museum studies, heritage agencies, or comparable institutions.
- A resume.
- Three letters of reference, written on institutional or work-related letterhead. Appropriate referees include university professors (preferred), museum professionals, or others relevant to the field of museology.
- Other relevant information considered by the applicant to strengthen his or her application.
- Applicants are admitted as students for the MMSt under the General Regulations of the School of Graduate Studies.

Program Requirements

- Minimum requirement is 7.0 full-course equivalents (FCE) also known as credits, including 1.5 credits for internal and external electives of which at least 0.5 credit must be internal (Museum Studies) elective courses.
- In order to maintain good academic standing and to continue in the MMSt program, a student must
  - maintain a B+ average overall;
  - complete at least 3.0 FCE, including MSL 1000H; MSL 1100H or MSL 1300H; MSL 1150H; MSL 1200H; and MSL 1350H by the end of the program, with an average grade of at least B+;
  - complete MSL 5000Y during the first year;
  - complete MSL 3000Y during the summer session between the first and second year;
  - complete MSL 4000Y during the second year of the program.
- The study program for a full-time student begins in September and normally extends over 20 consecutive months.
- Before the end of their program, students whose primary language is English will be required to demonstrate a reading knowledge of a second language (preferably French) by means of a written exam and achieve a minimum grade of 70%.

+ Extended course. For academic reasons, course work is extended into session following academic session in which course is offered.
Degree Programs

Courses
Not all courses are offered every year. Please consult the Museum Studies Web site for course availability. The minimum requirement for the MMSt degree is 7.0 full-course equivalents (FCE), also known as credits.

MMSt Required Courses (5.5 FCE or credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSL 1000H</td>
<td>Museums and Public History</td>
</tr>
<tr>
<td>MSL 1100H</td>
<td>Museology and Theory</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>MSL 1300H</td>
<td>Contemporary Theories of Art and Culture</td>
</tr>
<tr>
<td>MSL 1150H</td>
<td>Collection Management</td>
</tr>
<tr>
<td>MSL 1200H</td>
<td>Fundamentals in Museum Planning and Management</td>
</tr>
<tr>
<td>MSL 1350H</td>
<td>Museums and their Publics</td>
</tr>
<tr>
<td>MSL 3000Y</td>
<td>Internship</td>
</tr>
<tr>
<td>MSL 4000Y</td>
<td>Exhibition Project</td>
</tr>
<tr>
<td>MSL 5000Y</td>
<td>Research Methods</td>
</tr>
</tbody>
</table>

MMSt Elective Courses (total 1.5 FCE or credits for internal and external electives)

Internal (Museum Studies) Elective Courses (at least 0.5 FCE or credit)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSL 2000H</td>
<td>Curatorial Practice</td>
</tr>
<tr>
<td>MSL 2100H</td>
<td>Museum Environment</td>
</tr>
<tr>
<td>MSL 2200H</td>
<td>The History of Museums in Canada</td>
</tr>
<tr>
<td>MSL 2225H</td>
<td>Architecture and Museums</td>
</tr>
<tr>
<td>MSL 2250H</td>
<td>Topics on Museums and Society in Canada</td>
</tr>
<tr>
<td>MSL 2325H</td>
<td>Museums and New Media Practice</td>
</tr>
<tr>
<td>MSL 2330H</td>
<td>Interpretation and Meaning-Making in Cultural Institutions</td>
</tr>
<tr>
<td>MSL 2340H</td>
<td>Issues in Cultural Policy and Contemporary Culture</td>
</tr>
<tr>
<td>MSL 2350H</td>
<td>Museum Planning and Management: Projects, Fundraising and Human Resources</td>
</tr>
<tr>
<td>MSL 5050H</td>
<td>Special Studies</td>
</tr>
</tbody>
</table>

External Elective Courses
Courses relevant to the Museum Studies program and student interests are available within the listings of other graduate units as found in this calendar.

McLuhan Program in Culture and Technology
The McLuhan Program in Culture and Technology does not offer a degree program. Students registered in a graduate program may take McLuhan program courses for credit with the permission of their home department.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>JAC 1001H</td>
<td>Media, Mind, and Society I</td>
</tr>
<tr>
<td>JAC 1002H</td>
<td>Media, Mind, and Society II</td>
</tr>
<tr>
<td>C&amp;T 1003H</td>
<td>Comparative Orality and Literacy</td>
</tr>
</tbody>
</table>

C&T 1004H Communications: History/Theory/Technology
C&T 1005H Understanding McLuhan
C&T 1009H New Media and Policy
C&T 1100H Special Topics in Communication and Culture

Students interested in pursuing studies in the impact of communication media on humans and their environment should consult the Director of the program for a list of courses available in cognate departments.

Graduate Faculty

Full Members

- Clare Beghtol - BA, MLS, PhD
- Nadia Caidi - BA, MA, MLS, PhD
- Joan Cherry - BSc, MLS, PhD
- Chun Wei Choo - BA, MA, MSc, DipBusAdmin, DipComputerSci, PhD
- Andrew Clement - BSc, MSc, PhD
- Barbara Craig - BA, MA, PhD
- Marcel Danesi - BA, MA, PhD, FRSC
- Derrick De Kerckhove - BA, MA, PhD, Dip 3eme Cycle, FRSC
- Juris Dilevko - BA, MA, PhD, MLI S, PhD
- Wendy Duff - BA, MLS, PhD
- E Patricia Fleming - BA, BLS, MLS, MA, PhD, FRSC
- Francesco Guardiani - DLetta, MA, PhD
- Bert Hall - BA, PhD
- Lynne Howarth - BA, MLS, PhD
- Jens-Erik Mai - PhD (Vice-Dean)
- David Phillips - PhD
- Brian Cantwell Smith - BS, MS, PhD, Canada Research Chair (Dean)
- Alan Stanbridge - BSc, MA, PhD
- Lynne Teather - BA, MA, PhD
- Barry Wellman - BA, MA, PhD
- Eric Yu - BSc, MMath, PhD

Members Emeriti

- John Fleming - BA, MA, PhD
- Ursula Franklin - PhD, LLDe, DSc, DDN, CC, FRSC, University Professor Emeritus
- Nancy Williamson - BA, BLS, MLS, PhD

Associate Members

- Sandra Alston
- Jennifer Bayne - MLS
- P Michael Bell - BA, MA
- Carl Benn - BA, MDN, PhD
- Joseph Cox - MLS
- Shelley Falconer - BA, MMst
- Loren Fantin - MLIS
- Ian Gregory - RGD
- Stephen Hockema - PhD
- Joseph Janes - PhD
- Helen Katz - MLS

238 Information Studies
Degree Programs

Italian Studies  ITA

Faculty Affiliation
Arts and Science

Degree Programs Offered
Italian Studies – MA, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Book History and Print Culture, see p.
   • Italian Studies, MA, PhD
2. Editing Medieval Texts, see p.
   • Italian Studies, PhD

Overview
The Master of Arts program offers advanced education in all areas of Italian studies and provides training in research techniques.

The Doctor of Philosophy program prepares students for a career in teaching and scholarship. Graduates are expected to have acquired autonomy in conducting research, preparing scholarly publications, teaching undergraduate courses in all areas of Italian studies, and in designing and teaching 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.

Contact and Address
Web: www.utoronto.ca/italian
E-mail: italian.studies@utoronto.ca
Telephone: (416) 926-2345
Fax: (416) 926-7107

Department of Italian Studies
Carr Hall, 2nd Floor
100 St. Joseph Street
Toronto, Ontario M5S 1J4
Canada

Degree Programs

Master of Arts

Minimum Admission Requirements
• Applicants are accepted under the general regulations provided that they also satisfy the department's requirements stated below.
• Successful completion of 7.0 undergraduate full-course equivalents (FCE) in Italian literature (students must have at least 0.5 FCE in each of 3 out of four different periods: medieval, Renaissance, 17th-18th centuries, modern) 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.
• 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.

Program Requirements
• Successful completion of ITA 1000H Methodologies for the Teaching and Study of Italian and 4.0 additional graduate full-course equivalents (FCE).
• A student's program of study must be approved by the department.

Doctor of Philosophy

Minimum Admission Requirements
• Applicants are admitted via one of two routes:
  o Successful completion of the University of Toronto MA or its equivalent with an overall average of at least A- in courses.
  o 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.
• A personal statement of intent.
Note: Applicants with a degree equivalent to a PhD in Italian Studies (e.g., an Italian dottorato di ricerca) cannot be accepted into the PhD program.

Program Requirements
• Students entering with a MA degree will normally complete 4.0 graduate full-course equivalents (FCE) for a total of 8.0 FCE, including those taken in the MA program. With the department's approval, students may choose one graduate course outside the department in an area cognate with the student's area of specialization. Students must also complete the 0.5 FCE ITA 1000H Methodologies for the Teaching and Study of Italian; 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 of one other language approved by the department.
• Students entering with a BA degree will normally complete 4.0 FCE in addition to the PhD requirements for a total of 8.0 FCE plus the required 0.5 FCE ITA 1000H.
• All students must maintain a minimum A- average in order to remain in the program.

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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 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.

Courses

Not all courses are offered every year. Please consult the department regarding course availability.

ITA 1000H Methodologies for the Teaching and Study of Italian (Credit/No Credit)
ITA 1001Y Colloquia and Professional Development (Credit/No Credit)
ITA 1025H Old Italian
ITA 1026H Italian Dialectology
ITA 1087Y Italian Syntax and Stylistics
ITA 1110H History of the Italian Language
ITA 1165H Introduction to Italian Philology
ITA 1170H Textual Criticism and the Editing of Early Italian Texts
ITA 1177H The Italian Questione della Lingua
ITA 1200H Dante
ITA 1203H Boccaccio
ITA 1330H Petrarch and Petrarchism
ITA 1455H Women Writers in Italy
ITA 1520H Renaissance Humanism
ITA 1525H Renaissance Dialogue
ITA 1530H Machiavelli
ITA 1535H Topics in Italian Literature
ITA 1540H Renaissance Italian Theatre
ITA 1545H The Sacra Rappresentazione
ITA 1550H Sixteenth-Century Florence
ITA 1560Y Chivalric Literature from the Origins to Ariosto
ITA 1565H Tasso
ITA 1591H Baroque Poetics and Poetry
ITA 1592H Baroque Poetry and Neobaroque Poetics
ITA 1594H Arcadia and Eighteenth-Century Literature
ITA 1597H The Commedia dell’Arte
ITA 1601H Vico
ITA 1605H Theories of the Stage and Dramatic Criticism
ITA 1610H Seventeenth- and Eighteenth-Century Theatre
ITA 1645H Prost-Tridentine Religious Drama
ITA 1650H Neoclassical and Pre-Romantic Literary Culture
ITA 1661H Topics in Nineteenth-Century Italian Literature
ITA 1662H Topics in Italian Romanticism
ITA 1668H Verga and Verismo
ITA 1705H Pirandello
ITA 1710H Aspects of Modern Italian Poetry
ITA 1720H Italian Theatre from Verismo to Futurism
ITA 1723H Trends in the Italian Novel 1900-1960
ITA 1728H New Trends in the Italian Novel From 1957 to the Present
ITA 1729H Contemporary Literary Criticism in Italy
ITA 1730Y Aspects of Semiotic Theory and Practice in Italy
ITA 1735H Topics in Italian Studies I
ITA 1736H Topics in Italian Studies II
ITA 1737H Topics in Italian Studies
ITA 1739H Topics in Italian Studies
ITA 1740H Contemporary Italian Women Writers
ITA 1755H Italian Modernism
ITA 1760H From Futurism to Novecentismo: The Rise and Fall of the Italian Avant-Garde
ITA 1810H Studies in Italian Literature and Film
ITA 1815H Issues in Italian Film Historiography
ITA 2010Y Directed Research in Italian Linguistics
ITA 2011H Directed Research in Italian Linguistics
ITA 2020H Directed Computer Research in Italian Studies
ITA 2021H Computer Assisted Research in Italian Language and Literature
ITA 2030H Second Language Acquisition and Italian
ITA 2031H Third Language Acquisition and Italian
ITA 3000H Topics in Italian-Canadian Studies
JIC 5000H Narrativity and Intertextuality in Italian Fiction
JMI 1951H Italian Musical Theatre of the Baroque and Classic Periods
JRL 1100Y Introduction to Romance Philology
MST 3162H Boccaccio and Chaucer

Graduate Faculty

Full Members
Salvatore Bancheri - BA, MA, PhD
Rocco Capozzi - BA, MA, PhD
Konrad Eisenbichler - BA, MA, PhD
Antonio Franceschetti - LittD, PhD
Manuela Gieri - DLett, PhD
Francesco Guardiani - DLett, MA, PhD
Michael Lettieri - BA, MA, PhD
Domenico Pietropaolo - BSc, MA, PhD (Chair)
Olga Pugliese - BA, MA, PhD
Luca Somigli - DLett, PhD (Coordinator of Graduate Studies)

Associate Members
Jana Vizmuller-Zocco - BA, MA, PhD
Laboratory Medicine and Pathobiology LMP

Faculty Affiliation
Medicine

Degree Programs Offered
Laboratory Medicine and Pathobiology – MSc, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Biomedical Engineering, see p. 418
   • Laboratory Medicine and Pathobiology, MSc, PhD
2. Cardiovascular Sciences, see p. 426
   • Laboratory Medicine and Pathobiology, MSc, PhD
3. Developmental Biology, see p. 433
   • Laboratory Medicine and Pathobiology, PhD
4. Genome Biology and Bioinformatics, see p. 448
   • Laboratory Medicine and Pathobiology, PhD
5. Neuroscience, see p. 466
   • Laboratory Medicine and Pathobiology, MSc, PhD
6. Toxicology, Biomedical, see p. 421
   • Laboratory Medicine and Pathobiology, MSc, PhD

Overview
The graduate program in Laboratory Medicine and Pathobiology provides a curriculum of courses and a broad-based multidisciplinary approach to research in mechanisms of human disease leading to Master of Science and Doctor of Philosophy degrees. The program emphasizes:
1. Bone and Matrix Pathobiology
2. Cancer
3. Vascular and Cardiovascular Pathobiology
4. Immunopathology, Lymphatics and Transplantation
5. Neuropathobiology and Endocrine Disorders
6. Microbiology and Infectious Disease

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 Web site www.lmp.facmed.utoronto.ca.

Contact and Address
Admission:
Web: www.lmp.facmed.utoronto.ca
Email: marika.michael@utoronto.ca
Telephone: (416) 978-2550
Fax: (416) 978-7361

Program:
Web: www.lmp.facmed.utoronto.ca
Email: yen.du@utoronto.ca
Telephone: (416) 978-2663
Fax: (416) 978-7361

Graduate Department of Laboratory Medicine and Pathobiology
100 College Street
Banting Institute
University of Toronto
Toronto, Ontario M5G 1L5
Canada

Degree Programs

Master of Science

Minimum Admission Requirements
- Applicants must have completed, or be about to complete, one of the following:
  o Pathobiology Specialist Program
  o Four-year honours BSc in Life Sciences
  o Professional degree (e.g., M.D., D.D.S., D.V.M., or equivalent)
- A minimum A- average over the final two years of undergraduate study.
- Three strong letters of recommendation from faculty members familiar with the applicant’s academic work.
- Detailed curriculum vitae.
- 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 and an interview with a member of the departmental graduate faculty.
- Admission is finalized when a graduate faculty member agrees to supervise the student’s research and guarantees a full stipend for the student.
- Prior to the start of the third year of the PhD program, the advisory committee may recommend that a PhD
student transfer to the MSc program; the student may also request the transfer.

Program Requirements
- Students must be on campus and participating for the duration of their registration in the program.
- Students who have not previously completed LMP 1404H Molecular and Cellular Mechanisms of Disease, or an approved equivalent, will be required to take this course in the first year of their program. Students exempted from LMP 1404H will take a departmental half-course as a substitute. The student’s advisory committee may recommend additional courses.
- Students must enrol and participate in a credit/no credit course, LMP 1001Y Graduate Seminars in Laboratory Medicine and Pathobiology, which must be taken throughout the program.
- Students are required to attend the departmental guest lecture series, Seminars in Molecular Pathobiology, that immediately follows the student seminar course LMP1001Y.
- Completion of a thesis under the direction of the student's supervisor, assisted by the advisory committee.
- The duration of the MSc program is usually 18 months. Within 12 to 18 months of entry, students will be advised by their committee to do one of the following:
  - write and orally defend a thesis on research completed,
  - transfer to the PhD program, or
  - withdraw from the MSc program.
- The research content of the MSc thesis is expected to generate the equivalent of one paper published in a peer-reviewed scientific journal.

Doctor of Philosophy

Minimum Admission Requirements
- Two routes of entry are available:
  - **Track A** - Direct entry is available for highly qualified BSc graduates having completed the Pathobiology Specialist Program or a four-year undergraduate program in the life sciences with a minimum A average in the third and fourth years and relevant research experience. These students are encouraged to apply directly to the PhD program.
  - **Track B** - MSc graduates and applicants with a MD, DDS, DVM (or equivalent) degree are eligible for the PhD program. An A- average or higher is required in graduate courses or in a four-year BSc program if there were no course requirements in the MSc program.
- 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. Departmental appraisal forms must be used. Normally, one of the referees should be the applicant's research supervisor.
- A detailed curriculum vitae.
- Statement of intent (approximately 250 words).
- Applicants are selected by the Departmental Admissions Committee on the basis of academic excellence and successful performance at an interview with a member of the departmental graduate faculty. 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.
- Excellent students with high academic standing (normally 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. Transfer to the PhD program is based on the student's performance at an assessment examination, which is held 12 to 18 months after the start of the MSc program.
- A limited number of selected students may enter the MD/PhD program subject to admission into both the departmental PhD program and the MD program.

Program Requirements
- Students must be on campus and participating for the duration of their registration in the program.
- MSc graduates normally complete their PhD programs within four years of registration in the program. Direct entry students and PhD transfer students are expected to complete their PhD programs within five years.
- Students who have not previously completed LMP 1404H Molecular and Cellular Mechanisms of Disease, or an approved equivalent, are required to take this course in the first year of their PhD program. The student’s advisory committee may recommend additional courses. Students exempted from LMP 1404H take a departmental half-course as a substitute.
- All students are required to take three half-course equivalents plus an ongoing credit/no credit seminar course, LMP 1001Y. These courses must include at least one half-course in Laboratory Medicine and Pathobiology. Students having completed the undergraduate Pathobiology Specialist Program (or equivalent) are required to take two half-courses in addition to the departmental core course (LMP 1404H) and seminar course (LMP 1001Y). Course work should be completed in the first two years of the program, the continuing seminar course excepted. The latter half of the program is focused on research.
- Students who take additional graduate courses during the MSc program at the University of Toronto and who continue their graduate studies in the PhD program may receive a transfer credit for MSc courses toward doctoral course requirements. Credit
for courses from universities other than the University of Toronto must be approved by the Graduate Coordinator; certain restrictions may apply.

- Students are required to attend the departmental guest lecture series, Seminars in Molecular Pathobiology, that immediately follows the student seminar course LMP 1001Y.
- PhD students are normally expected to present at least one graduate research seminar in LMP 1001Y prior to defending their thesis.
- 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.

Courses

Not all courses are offered every year. Please check the departmental Web site, www.lmp.facmed.utoronto.ca, for course availability.

LMP 1001Y Graduate Seminars in Laboratory Medicine and Pathobiology (Credit/No Credit) (Mandatory for all MSc and PhD students in the Department of Laboratory Medicine and Pathobiology)

LMP 1005Y General and Special Pathology (For Oral Pathology Residents only)

LMP 1006H Biological Electron Microscopy

LMP 1012H Seminars on Pathology (Open to students in Biomedical Communications only)

LMP 1013H Neoplasia

LMP 1015H Vascular Pathobiology

LMP 1016H The Pathology of Connective Tissue

LMP 1018H Molecular Biology and Applications to Human Disease

LMP 1019H Research Techniques in Molecular Biology and Pathobiology

LMP 1020H Inflammation, Immunity, and Immunopathology

LMP 1401Y Clinical Biochemistry (For Residents and Diploma students only)

LMP 1404H Molecular and Cellular Mechanisms of Disease (Mandatory for all MSc and PhD students in the Department of Laboratory Medicine and Pathobiology)

LMP 1407H Introductory Clinical Epidemiology and Applied Biostatistics

LMP 1503H Signal Transduction Pathways in Normal and Diseased Tissues

LMP 1504H Cell and Molecular Biology of Cardiovascular Diseases

LMP 1505H Analytical Clinical Biochemistry

LMP 1510H Molecular Biological Aspects of Analytical Biochemistry: Molecular Biology Techniques

LMP 1515H Cell Death Pathways in Development, Tissue Homeostasis and Pathobiology

LMP 1520H Translational Research in Pathobiology

LMP 2115H Selected Topics in Medical Microbiology

RST 9999Y Research Project

Graduate Faculty

Full Members

Mohamed Abdelhaleem - MD, PhD, FRCP(C)

Khosrow Adeli - BSc, MSc, PhD

Benjamin Alman - MD, FRCCS, Canada Research Chair

Irene Andrulis - BA, PhD

Sylvia Asa - MD, PhD, FRCP(C), FCAP

Isabelle Aubert - BSc, PhD

Andrew Baines - MD, PhD, FRCP(C)

Bharati Bapat - BSc, MSc, PhD

Dwayne Barber - BSc, PhD

Darrin Bast - BSc, PhD

Michelle Bendek - BSc, PhD

Catherine Bergeron - MD, FRCP(C)

Joan Boggs - BA, MSc, PhD

Andrew Bognar - BSc, PhD

Donald Branch - PhD

Roderick Angus Bremner - PhD

Martha Brown - BSc, MSc, PhD

James Brunton - BSc, MD, FRCP(C)

David Cole - MD, PhD, FRCP(C)

Philip Connelly - BA, PhD

David Courtman - BSc, MSc, PhD

Ernest Cutz - MD, FRCP(C)

Myron Cybulsky - MD

Joyce De Azavedo - BSc, MSc, PhD

James Dennis - BSc, MSc, PhD, Canada Research Chair

Gregory Denomme - BSc, PhD

Sandy Der - BSc, PhD

Eleftherios Diamandis - PhD, MD, FCACB, FRCP(C)

Peter Dirks - MD, PhD

Sarma Dittakavi - BSc, MSc, PhD

Susan Done - BA, MA, PhD, MBA, FRCP(C)

Daniel Drucker - MD, FRCP, Canada Research Chair

Richard Ellen - DDS, CertPerio, CertOralMed&Microbio

Harry Elsholtz - BSc, MSc, PhD (Coordinator of Graduate Studies)

Steven Gallinger - MD, MSc, FRCP(C)

Stephen Girardin - PhD, CRC Chair

Avrum Gollob - BSc, MDCM, FRCP(C) (Chair)

Marc Greypas - MSc, PhD

Neeru Gupta - MD, PhD

David Gutman - BS, PhD, Canada Research Chair

Paul Hamel - BSc, PhD

Rene Harrison - BSc, MSc, PhD

Cynthia Hawkins - BSc, PhD, MD, FRCP(C)
Degree Programs

Laboratory Medicine and Pathobiology

David Hedley - MBCHB, MD
Aleksander Hinek - MD, PhD, DSc
Margaret Hough - BSc, PhD
Jim Hu - BSc, PhD
Mansoor Husain - BSc, MD
David Irwin - BSc, PhD
Meredith Irwin - BSc, MD, Canada Research Chair
Tianru Jin - MD, PhD
Miles Johnston - BSc, PhD
Sadhna Joshi-Sukhwal - BSc, MSc, PhD, DSc
Serge Jothy - MD, MSc, PhD, LMCC, FRCP(C)
Kevin Kain - MD, FRCP(C), Canada Research Chair
Suzanne Knel-Reid - BA, MA, PhD
Rita Kandel - BSc, PhD
B Lowell Langille - BSc, MSc, PhD
Herbert Lau - BSc, MA, PhD
Alan Lazarus - PhD
Gary Levy - BSc, MD, FRCP, FRCP(C)
Clifford Lingwood - BSc, PhD
Donald Low - BSc, MD
Gergely Lukacs - MD, FRCP(C)
Don Mahuran - PhD
Philip Marsden - MD, Keenan Chair in Medical Research
Tony Mazzulli - MD, FRCP(C)
Martin McGavin - BSc, PhD
Colin McKenzie - DVM, DSc, MRCVS
Joanne McLaurin - BSc, MSc, PhD
Joe Menta - BSc, MSc, PhD
Jeremy Mogridge - BSc, PhD, Canada Research Chair
Sukriti Nag - MBBS, MD, MSc, PhD, FRCP(C)
Heyu Ni - MD, PhD
Michael Ohh - BSc, PhD, Canada Research Chair
Michal Opas - MSc, PhD
Mario Ostrowski - MD, FRCP(C), specialist in infectious diseases
Hilmi Ozcelik - PhD
Nades Palaniyappan - BSc, MSc, PhD
Martin Post - PhD, DVM, Canada Research Chair
Kenneth Pritchard - BSc, MD, FRCP(C)
Gerald Prud'homme - MD
Margaret Rand - BSc, PhD
Marciano Reis - MD
Janice Robertson - BSc, PhD, Canada Research Chair (Molecular Mechanisms of ALS)
Norman Rosenblum - BSc, MD, FRCP(C), Canada Research Chair
Dean Rowe-Magnus - BSc, MSc, PhD
Maria Rozakis-Adcock - BSc, PhD
James Rutka - MD, PhD, FRCS(C)
John Wesley Semple - PhD
Arun Seth - BSc, MSc, PhD
Patricia Shaw - MD, FRCP(C)
Pang Shek - BSc, MSc, PhD
Philip Sherman - MD, FRCP(C), Canada Research Chair
Jeremy Squire - BSc, MSc, PhD, JC Boyleau Grant Chair in Oncologic Pathology
Rajalakshmi Srinivasan - BSc, MA, PhD
Duncan Stewart - MD, CH, FRCP(C)
Bradley Strauss - MD
Michael Taylor - BSc(Hons), MD, PhD
Raymond Tellier - MD, MSc, FRCP, CSPO
Douglas Templeton - BSc, MD, PhD
Howard Tenenbaum - DDS, DipPerio, PhD, FRCD(C)
Paul Thorne - MD, PhD, FRCP(C)
Ming-Sound Tsao - BSc, MD, FRCP(C)
Reinhold Vieth - BSc, MSc, PhD
Chen Wang - MD, PhD, FRCP
Michael Ward - MD, PhD, FRCP(C)
Gregory Wilson - BSc, MSc, MD, FRCP(C)
Pui-Yuen Wong - Ph, FCACB
Burton Yang - BSc, MSc, PhD
Herman Yeger - BSc, MSc, PhD
Yeni Yucel - MD, PhD, FRCP(C)
Eldad Zackenhausz - BSc, PhD
Li Zhang - MD, MSc, PhD
Maria Zielenska - MSc, PhD

Members Emeriti
Alexander Marks - MD, PhD
Mario Moscarello - BA, MD, PhD

Associate Members
Hong Chang - MD, PhD, FRCP
Ian Crandall - BSc, MSc, PhD
Bernard Fernandes - MB, ChB, FRCP(C)
Cyril Guyard - BSc, MSc, PhD
Annie Huang - MD, PhD, FRCP(C)
David Hwang - MSc, PhD, MD
Sarah Keating - MSc, MD
Valery Leytin - MSc, PhD, DSc
Ren-Ke Li - MSc, PhD
Dominic Ng - BSc, MSc, PhD, MD, FRCP(C)
Michael Pollanen - BSc, MD, PhD, MRCPath, DMJ(Path), FRCP(C) (Anatomic Pathology)
Robert Riddell - MBBS
Alexander Romaschin - PhD, FCAICB
Gerold Schnitt-Ulms - BSc, MSc, PhD
Gino Somers - MBBS, PhD, FRCPA
Ingrid Tein - BSc, MD
Ikuko Eileen Teshima - BSc, MSc, PhD, FCCMG, FACMG
Faculty Affiliation
Law

Degree Programs Offered
Law – LLM, MSL, SJD

Collaborative Programs Offered
Degree programs that participate in:
1. Bioethics, see p. 416
   • Law, SJD
2. Women and Gender Studies, see p. 473
   • Law, SJD

Overview
The Faculty of Law offers three graduate programs.

The Master of Laws (LLM) is a one-year degree program that provides students interested in continuing their study of the law beyond their first law degree with an opportunity to pursue a more profound study of specific legal issues. The LLM program can be undertaken with a strong emphasis on a thesis (with minor coursework) or with a strong emphasis on coursework (with a shorter thesis). The thesis-intensive format is for law students who have demonstrated a strong potential for advanced research and writing in a common law system. The course work-intensive format is for law students who wish to specialize in a specific area of law, particularly in one of the Law Faculty’s several strengths, or who wish to develop an understanding of North American legal processes and law, or who wish to explore the common law at an advanced level.

The Master of Studies in Law (MSL) is designed for scholars with no prior training in law who wish to acquire a knowledge of law in order to add a legal dimension to scholarship in their own discipline.

The Doctor of Juridical Science (SJD), a thesis degree program which normally takes three years to complete, is for outstanding law students seeking to pursue careers in teaching, policy, and research. Enquiries should be directed to the Graduate Program Coordinator, Graduate Program, Faculty of Law at the address below.

Contact and Address
Web: www.law.utoronto.ca/graduate/
E-mail: law.graduate@utoronto.ca
Telephone: (416) 978-0213
Fax: (416) 978-2648

Faculty of Law
78 Queen’s Park
University of Toronto
Toronto, Ontario M5S 2C5
Canada

Degree Programs
Master of Laws

Minimum Admission Requirements
• Bachelor of Laws or Juris Doctor degree from the University of Toronto or a recognized university, or possess equivalent qualifications, with demonstrated proficiency in the study of law. A minimum B+ average is required.
• 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) with the following minimum scores:
  o paper-based TOEFL: 600 and 5 on the TWE
  o computer-based TOEFL: 250 and 5 on the essay rating component
  o internet-based TOEFL: 100/120 and 22/30 on the writing and speaking sections.

Offers of admission conditional upon successful completion of an English language test will not be offered.

Program Requirements
• A course of studies and a thesis which, combined, are valued at 24 credit hours.
• The course of studies shall involve a minimum of 8 credit hours of course work and a maximum of 20 credit hours of course work. The thesis shall involve a minimum of 4 credit hours (in which case the thesis will generally be expected to be approximately 15,000 to 18,000 words) and a maximum of 16 credit hours (in which case the thesis will generally be expected to be approximately 30,000 to 45,000 words).
• Mandatory graduate seminar, Alternative Approaches to Legal Scholarship.
• All course work and the thesis shall be graded using the SGS grading scale.
• In determining the composition of the course of studies and the weight to be given to the thesis, the Faculty will endeavour to structure a program designed to accommodate an individual student and the subject matter of the thesis. However, such course of studies and the weight of the thesis shall at all times be determined by the Faculty.
• The program may be completed on a full-time or part-time basis. Students must be in attendance for at least two academic sessions (eight months, September to April).
Master of Studies in Law

Minimum Admission Requirements
- At least a bachelor's degree and preferably a doctorate, from this or another recognized university, with a demonstrated high level of scholarship in a discipline related to law.
- 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) with the following minimum scores:
  - paper-based TOEFL: 600 and 5 on the TWE
  - computer-based TOEFL: 250 and 5 on the TWE
  - internet-based TOEFL: 100/120 and 22/30 on the writing and speaking sections.
Offers of admission conditional upon successful completion of an English language test will not be offered.

Program Requirements
- The student must pursue a course of studies approved by the Faculty and by the SGS Admissions and Programs Committee. The course of studies will comprise at least 28, and not more than 32, course hours and will include at least 3 of the following subjects: contracts, torts, property, criminal law, constitutional law, and civil procedure.
- The program will also include a research project of an interdisciplinary nature.
- The student must be in full-time attendance for two academic sessions (eight months).
Note: In no circumstance will courses taken in an MSL program be accredited for the JD program.

Doctor of Juridical Science

Minimum Admission Requirements
- Bachelor of Laws or Juris Doctor degree (with a minimum B+ average) from the University of Toronto or a recognized university and a Master of Laws (with a minimum B+ average) from the University of Toronto or a recognized university, or possess equivalent qualifications. The Associate Dean, Graduate Studies, 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 Committee is satisfied that the applicant’s law record demonstrates excellence potential for independent legal research and writing at an advanced level.
- 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) with the following minimum scores:
  - paper-based TOEFL: 600 and 5 on the TWE
  - computer-based TOEFL: 250 and 5 on the TWE
  - internet-based TOEFL: 100/120 and 22/30 on the writing and speaking sections.

Offers of admission conditional upon successful completion of an English language test will not be offered.

Program Requirements
- The student must pursue a course of studies approved by the Faculty and by the SGS Admissions and Programs Committee. The course of studies will comprise at least 8 credit hours, including the thesis. The student must pursue a course of studies appropriate to the student's area of interest, with formal research on a thesis topic, a student must demonstrate competence in a broader area within which the topic falls. An Individual Area Committee 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 else consists of 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. Normally, a student will have satisfied the area requirement by the end of the first year of registration.
- At least a bachelor's degree and preferably a doctorate, from this or another recognized university, with a demonstrated high level of scholarship in a discipline related to law. A student must remain in attendance for at least four academic sessions (two periods of eight months each, September to April).
- At least a bachelor's degree and preferably a doctorate, from this or another recognized university, with a demonstrated high level of scholarship in a discipline related to law. A student must remain in attendance for at least four academic sessions (two periods of eight months each, September to April).
- At least a bachelor's degree and preferably a doctorate, from this or another recognized university, with a demonstrated high level of scholarship in a discipline related to law. A student must remain in attendance for at least four academic sessions (two periods of eight months each, September to April).
- A student must write the Test of English as a Foreign Language (TOEFL) with the following minimum scores:
  - paper-based TOEFL: 600 and 5 on the TWE
  - computer-based TOEFL: 250 and 5 on the TWE
  - internet-based TOEFL: 100/120 and 22/30 on the writing and speaking sections.

Offers of admission conditional upon successful completion of an English language test will not be offered.

Program Requirements
- A student must remain in attendance for at least two academic sessions (eight months, September to April).
- Complete the graduate seminar, LAW 245Y Alternative Approaches to Legal Scholarship.
- Other course work requirements are optional and shall be determined upon consultation with the supervisor. All course work 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. An Individual Area Committee 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 else consists of 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. Normally, a student will have satisfied the area requirement by the end of the first year of registration.
- A student must pursue a course of studies approved by the Faculty and by the SGS Admissions and Programs Committee. The course of studies will comprise at least 28, and not more than 32, course hours and will include at least 3 of the following subjects: contracts, torts, property, criminal law, constitutional law, and civil procedure.
- The program will also include a research project of an interdisciplinary nature.
- The student must be in full-time attendance for two academic sessions (eight months).
Note: In no circumstance will courses taken in an MSL program be accredited for the JD program.

Direct Entry SJD
- A student must be in attendance for at least four academic sessions (two periods of eight months each, September to April).
- Complete at least eight credit hours, including the graduate seminar, LAW 245Y Alternative Approaches to Legal Scholarship.
- All course work 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. An Individual Area Committee 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 else consists of 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. Normally, a student will have satisfied the area requirement by the end of the first year of registration.

- 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.
- Following completion of the area requirements, a thesis must be prepared which, in the opinion of the Faculty, will constitute a distinct contribution to legal research or scholarship, and the candidate must pass an oral examination based on the thesis.
- The thesis must be completed within five years from the date of enrolment in the program.

Courses

LAW 245Y Alternative Approaches to Legal Scholarship

Graduate Faculty

Full Members

Peter Benson - AB, MSc, LLB, LLM
Alan S Brudner - BA, MA, LLB, PhD
Jutta Brunnee - Ref jur, LLM, Doctor juris, Assoc jur
Bruce Chapman - BA, LLB, PhD
Sujit Choudhry - BSc, BA, LLB, LLM
Rebecca Cook - AB, MA, MPA, JD, LLM, JSD
Brenda Cossman - BA, LLB, LLM
donald Dewees - BSc, LLB, BScEE, PhD
David Grant Duff - BA, MA, LLB, LLM
Anthony Duggan - BA, LLB, LLM, LLD
David Dyzenhaus - BA, LLB, DPhil, FRSC (Associate Dean, Graduate Studies)

Ayelet Shachar - BA, MA, LLB, LLM, JSD
Martha Shaffer - AB, LLB, LLM
Lorne Sossin - BA, MA, LLB, PhD, LLM, JSD
Hamish Stewart - BA, LLB, ARCT, PhD
Michael Trebilcock - LLB, LLM, FRSC, University Professor
Catherine Valcke - LLB, LLM, JSD
Mariana Valverde - BA, MA, PhD, FRSC
Stephen Waddams - BA, LLB, MA, LLM, SJ, FRSC, The Goodman/Schipper Chair at the Faculty of Law
Ernest Weinrib - BA, LLB, PhD, University Professor, The Cecil A Wright Chair
Lorraine Weinrib - BA, LLB, LLM

Members Emeriti

Bernard Dickens - LLB, LLM, PhD, LLD, Dr. William M Scholl Professor Emeritus in Health Law and Policy
Martin Friedland - BCom, LLB, PhD, LLD, OC, QC, FRSC, University Professor Emeritus

Associate Members

Benjamin Alarie - BA, MA, LLB, LLM
Anita Anand - BA, MA, LLB, LLM
Lisa Austin - BA/BSc, LLB, MA
Nehal Bhuta - BA, LLB, MA, LLM
Michael Code - BA, LLB, LLM
Abraham Drassinower - BA, MA, LLB, PhD
Mohammad Fadel - BA, PhD, JD
Angela Fernandez - BPhil, MPH, LLB, LLM
Andrew Green - BA, MA, LLB, LLM, JSD
Ran Hirschl - BA, LLB, MA, MPhil, PhD, Canada Research Chair
Ariel Katz - BA, LLB, LLM, SJ
Ian Lee - BCOM, LLB, LLM
Judith McCormack
Stephanie Sophia Moreau - BA, BPhil, PhD, JD
Mariana Prado - LLB, LLM
Cheryl Regehr - BA, MSW, PhD, Sandra Rotman Chair in Social Work
Andrea Slane - BA, PhD, JD
George Vegh

Catherine Valcke - LLB, LLM, JSD
Mariana Valverde - BA, MA, PhD, FRSC
Stephen Waddams - BA, LLB, MA, LLM, SJ, FRSC, The Goodman/Schipper Chair at the Faculty of Law
Ernest Weinrib - BA, LLB, PhD, University Professor, The Cecil A Wright Chair
Lorraine Weinrib - BA, LLB, LLM

Members Emeriti

Bernard Dickens - LLB, LLM, PhD, LLD, Dr. William M Scholl Professor Emeritus in Health Law and Policy
Martin Friedland - BCom, LLB, PhD, LLD, OC, QC, FRSC, University Professor Emeritus

Associate Members

Benjamin Alarie - BA, MA, LLB, LLM
Anita Anand - BA, MA, LLB, LLM
Lisa Austin - BA/BSc, LLB, MA
Nehal Bhuta - BA, LLB, MA, LLM
Michael Code - BA, LLB, LLM
Abraham Drassinower - BA, MA, LLB, PhD
Mohammad Fadel - BA, PhD, JD
Angela Fernandez - BPhil, MPH, LLB, LLM
Andrew Green - BA, MA, LLB, LLM, JSD
Ran Hirschl - BA, LLB, MA, MPhil, PhD, Canada Research Chair
Ariel Katz - BA, LLB, LLM, SJ
Ian Lee - BCOM, LLB, LLM
Judith McCormack
Stephanie Sophia Moreau - BA, BPhil, PhD, JD
Mariana Prado - LLB, LLM
Cheryl Regehr - BA, MSW, PhD, Sandra Rotman Chair in Social Work
Andrea Slane - BA, PhD, JD
George Vegh

248 Law
Degree Programs

Linguistics  LIN

Faculty Affiliation
Arts and Science

Degree Programs Offered
Linguistics – MA, PhD

Overview
The Department of Linguistics offers Master of Arts and Doctor of Philosophy degree programs in three fields:
1. Theoretical Linguistics
2. Language Variation
3. Psycholinguistics

Contact and Address
Web: www.chass.utoronto.ca/linguistics/
E-mail: lingdept@chass.utoronto.ca
Telephone: (416) 978-4029
Fax: (416) 971-2688

Department of Linguistics
Sixth Floor, Robarts Library
Toronto, Ontario  M5S 3H1
Canada

Degree Programs

Master of Arts

Minimum Admission Requirements
• Applicants with a bachelor's degree, or equivalent, with a minimum B+ average, may be admitted to a one-year or two-year MA program, depending on their background in linguistics. Admission to a one-year program requires a strong background in linguistics with at least courses in introductory phonetics, phonology, morphology, and syntax. Admission to a two-year program is offered to exceptional applicants whose background is limited to these courses.

Program Requirements
• The one-year MA program normally requires 4.0 full-course equivalents (FCE) including courses LIN 1121H, LIN 1131H, LIN 1181H, LIN 1290Y, and JAL 1145H, or their equivalents, if not already taken, plus other requirements as determined by the Department.
• The two-year MA program normally requires 8.0 FCE including courses LIN1121H, LIN 1131H, LIN 1181H, LIN 1290Y, and JAL 1145H, or their equivalents, if not already taken, plus other requirements as determined by the Department. LIN1121H, LIN 1131H, and LIN 1181H are normally taken in the first year. LIN 1290Y is taken in the final year of the program.
• 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.

Doctor of Philosophy

Minimum Admission Requirements
• University of Toronto MA in linguistics, or its equivalent, with at least an A- average.

Program Requirements
• Students are normally required to complete 3.0 full-course equivalents (FCE) during the first year. Generals papers (LIN 2201H and LIN 2202H) in two areas of concentration (at least one of which must be in an area of linguistic theory) must be completed by the end of the second year.
• During these two years, students are normally required to be on campus full time for a residence period which entails being 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.
• The language requirement as outlined for the MA degree must be satisfied. Additionally, there is one more language requirement. Other requirements are determined in consultation with the graduate coordinator.
• 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.

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 Web site.

JAL 1145H Introduction to Field Methods
JAL 1155H Language and Gender
JAL 1170H Language Typology
JAL 1171Y Dialectology
JLP 2450H Psycholinguistics
JLP 2451H Language Acquisition
JLP 2452H Language Acquisition and Linguistic Theory
JRL 1100Y Introduction to Romance Philology
LIN 1000Y Introduction to Linguistics
LIN 1005H Quantitative Methods in Linguistics (Credit/No Credit)
Degree Programs

LIN 1028H  Phonetics
LIN 1029H  Sound Patterns in Language
LIN 1031H  Morphological Patterns in Language
LIN 1032H  Syntactic Patterns
LIN 1041H  Introduction to Semantics
LIN 1105H  Linguistic Structures
LIN 1106Y  Linguistic Structures
LIN 1115H  Second Language Acquisition
LIN 1121H  Phonological Theory
LIN 1126H  Phonetics
LIN 1127H  Phonetic Analysis
LIN 1131H  Introduction to Syntactic Theory
LIN 1133H  Morphology: Morphosyntactic Issues
LIN 1145H  Semantics
LIN 1151H  Urban Dialectology
LIN 1152H  Topics in Language Variation and Change
LIN 1156H  Language Variation and Change: Theory and Analysis
LIN 1162H  Comparative-Historical Linguistics I
LIN 1172H  Introduction to Cognitive Linguistics
LIN 1180H  History of Linguistic Thought
LIN 1181H  Introduction to Analysis and Argumentation
LIN 1182H  Language and Mind
LIN 1221H  Advanced Phonology I
LIN 1222H  Advanced Phonology II
LIN 1223H  Advanced Phonology III
LIN 1224H  Advanced Phonology IV
LIN 1226H  Advanced Phonetics
LIN 1231H  Advanced Syntax I
LIN 1232H  Advanced Syntax II
LIN 1233H  Advanced Syntax III
LIN 1234H  Advanced Syntax IV
LIN 1245H  Advanced Semantics I
LIN 1246H  Advanced Semantics II
LIN 1254H  Sociolinguistic Methods
LIN 1256H  Advanced Language Variation and Change
LIN 1270H  Language Processing and Linguistic Theory
LIN 1290Y  Linguistic Forum
LIN 1321H  Research in Phonology
LIN 1331H  Research in Syntax
LIN 1502Y  Reading Seminar
LIN 1503H  Reading Seminar
LIN 1504Y  Research Seminar
LIN 1507H  Individual Readings I
LIN 1509H  Individual Readings II
LIN 2201H  Generals Paper I
LIN 2202H  Generals Paper II

Graduate Faculty

Full Members
Parth Bhatt - BA, MA, PhD
Robert Binnick - BA, MA, PhD
Craig Chambers - BA, MA, PhD
Laura Colantoni - MA, PhD
Elizabeth Cowper - BA, AM, PhD
B Elan Dresher - BA, PhD (Chair)
Michela Ippolito - BA, MPhil, PhD
Alana Johns - BA, MA, PhD
Yoon Jung Kang - BA, PhD
Alexei Kochetov - BA, MA, PhD
Philippe Martin - IRAL BR, D Ile C, DSCA,ChPA
Diane Massam - BA, MA, PhD
Ana Teresa Perez-Leroux - BA, MA, PhD
Keren Rice - BA, MA, PhD, Canada Research Chair
Yves Roberge - BA, MA, PhD
Ronald Smyth - BA, MSc, PhD
Sali Tagliamonte - BA, MA, PhD (Coordinator of Graduate Studies)

Members Emeriti
John Chambers - BA, MA, PhD, DipEd
Peter Reich - BS, MS, PhD
Henry Rogers - BA, MA, PhD

Associate Members
Duk-Ho An - BA, MA, PhD
Heriberto Avelino - BA, MA, PhD
Susana Bejar - BA, MA, PhD
Marshall Chasin - BSc, MSc, AuD, Reg CASLPO, Aud(C), FAA
Maria Cristina Cuervo - MA, PhD
Elaine Gold - BA, MA, PhD
Daniel Currie Hall - BA, MA, PhD
Rena Helms-Park - BA, MA, PhD, TESL
Emmanuel Nikiema - MA, PhD
Mihaela Pirvulescu - BA, MA, PhD
Jeffrey Steele - BA, MA, PhD
Management MGT

Faculty Affiliation
Management

Degree Programs Offered
Management – MBA, EMBA, Combined BASc/MBA, Combined JD/MBA, MF, PhD
Master of Business Administration – MBA
Executive Master of Business Administration – EMBA
Global Executive Master of Business Administration – EMBA
Combined Bachelor of Applied Science/Master of Business Administration – JD/MBA
Master of Finance – MF
Doctor of Philosophy – PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Asia-Pacific Studies, see p. 413
   • Management, MBA
2. Environmental Studies, see p. 443
   • Management, MBA, PhD
3. Management and Economics, see p. 464
   • Management, PhD

Overview
The Joseph L. Rotman School of Management offers a suite of management programs including the Master of Business Administration, available in two-year and three-year formats; an Executive Master of Business Administration, a one-year format designed for senior managers; the Omnium Global Executive Master of Business Administration, an alternative to the EMBA for executives wanting to participate in an internationally-focused business program; the Master of Finance, training tomorrow’s global finance leaders; and a world-class doctoral program, the Doctor of Philosophy. The PhD program offers specialization in six different fields: accounting, finance, human resource management and organization behaviour, marketing; operations management; and strategic management. Other areas are available for selection as the minor field in management including international business.

In addition, the Rotman School of Management offers two combined MBA degree programs. The Combined JD/MBA is a four-year program offered by the Faculty of Law and the Rotman School of Management for students who wish to combine graduate training in management with a degree in law. The Combined Jeffrey Skoll BASc/MBA, established by the Faculty of Applied Science and Engineering and the Rotman School of Management, provides a fast track for students to earn their bachelor’s degree in engineering and an MBA in six years and eight months.

Contact and Address
Web: www.rotman.utoronto.ca
Telephone: MBA: (416) 978-3499
Executive MBA: (416) 946-3022
Global Executive MBA: (416) 946-3022/ www.omniumgemba.com
PhD: (416) 978-4226

Joseph L. Rotman School of Management
105 St. George Street
University of Toronto
Toronto, Ontario M5S 3E6
Canada

Degree Programs
Master of Business Administration – Two-Year Program

Minimum Admission Requirements
• Four-year University of Toronto bachelor’s degree or equivalent.
• Satisfactory score on the Graduate Management Admissions Test (GMAT) www.gmac.com. Test results are valid for five years.
• Preferential consideration given to applicants who demonstrate a minimum of two years of full-time work experience.
• English Language Facility. Satisfactory performance on one of the following tests:
  o Test of English as a Foreign Language (TOEFL) and Test of Written English (TWE) with the following minimum scores:
    – Paper-Based TOEFL exam: 600 with a minimum score of 5.0 on the TWE.
    – Computer-based TOEFL exam: 250 with a minimum score of 5.0 on the TWE
    – Internet-based TOEFL exam: overall score of 100 with 22 on the writing section.
  o IELTS – minimum score required is 7.0
  o MELAB – minimum score required is 85
  o COPE – minimum score required is 4 (with at least 1 in each component and 2 in the writing component)
  o Academic Preparation Course with the School of Continuing Studies, University of Toronto final grade of B in level 60 is required

Program Requirements
• Within this 16-month program (two academic years) students must:
  – Complete a set of mandatory first-year courses at the 1000-level. Each course has a weighting of 1, 2 or 3 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).
Complete 5.0 elective full-course equivalents (FCE) at the 2000-level (equivalent to ten 2000-level courses). With the permission of the Assistant Dean and Executive Director, MBA Programs, students may take up to five 2000-level courses from another graduate unit or participate in a School- or University-approved international exchange program. In all cases, the courses selected are subject to the approval of the Assistant Dean and Executive Director, MBA Programs.

• All requirements for the degree must be completed within six years from the date of first enrolment in the MBA program.

Master of Business Administration – Three-Year Program

Minimum Admission Requirements

• Four-year University of Toronto bachelor’s degree or equivalent.
• Satisfactory score on the Graduate Management Admissions Test (GMAT) www.gmac.com. Test results are valid for five years.
• Preferential consideration given to applicants who demonstrate a minimum of four years of full-time work experience.
• English Language Facility. Satisfactory performance on one of the following tests:
  o Test of English as a Foreign Language (TOEFL) and Test of Written English (TWE) with the following minimum scores:
    o Paper-Based TOEFL exam: 600 with a minimum score of 5.0 on the TWE.
    o Computer-based TOEFL exam: 250 with a minimum score of 5.0 on the TWE.
    o Internet-based TOEFL exam: overall score of 100 with 22 on the writing section.
  o IELTS – minimum score required is 7.0.
  o MELAB – minimum score required is 85.
  o COPE – minimum score required is 4 (with at least 1 in each component and 2 in the writing component).

Program Requirements

• There are two sections in the Three-Year Program: Evening section (36 months) and Morning section (32 months).
• Students must:
  o Complete a set of mandatory 1000-level courses. Each course has a weighting of 1, 2 or 3 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).
  o Complete 5.0 full-course equivalents (FCE) at the 2000-level (equivalent to ten 2000-level courses). With the permission of the Assistant Dean and Executive Director, MBA Programs, students may take up to five 2000-level courses from another graduate unit or participate in a School- or University-approved international exchange program. In all cases, the courses selected are subject to the approval of the Assistant Dean and Executive Director, MBA Programs.

Combined JD (Law)/MBA Program

Minimum Admission Requirements

• Applicants must be admitted to both the Faculty of Law and the Rotman School of Management. Individual applications are required for both programs and applicants must satisfy the admission requirements of both faculties independently.
• Management admission criteria are the same as those for the two-year MBA program, with the following exception: although work experience is not a requirement, the average MBA student would desirable have five years’ experience. It is expected that JD/MBA applicants’ academic and personal background reflects diversity and life experience.
• Applicants must obtain satisfactory scores in the Law School Admission Test (LSAT) and the Graduate Management Admission Test (GMAT).
• Students who are in the first year of either of the JD or Two-Year Program may apply for admission to the combined JD/MBA Program by meeting the normal application and admission requirements for the other faculty.

Program Requirements

• Within this combined four-year program, students must:
  o register and complete the first year of the JD program with at least a B standing to continue in the program.
  o complete the MBA 1000-level core courses with at least a B+ to be eligible to continue in the program.
  o A further 3.0 full-course equivalents (FCE) at the 2000-level (equivalent to six 2000-level courses) from the Rotman School of Management and 45 credits from the Faculty of Law (in addition to the JD requirements to complete a Moot, a Perspective course, and the Extended Writing Requirement).

Combined BASc (Engineering)/MBA Program

Minimum Admission Requirements

• Students in the second or third undergraduate year at the Faculty of Applied Science and Engineering are eligible to apply for the combined BASc/MBA degree program.
• Applicants need a minimum B+ (77%) average in each of the following four sessions: 1W, 2F, 2W, 3F; participation in the PEY program, as well as satisfactory GMAT scores to be considered.

Program Requirements
• Within this combined six-year program, students in:
  o Years 1-4: complete engineering studies before entering MBA studies.
  o Year 5: complete a set of mandatory 1000-level MBA courses. Each course has a weighting of 1, 2, or 3 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.
  o Year 6: complete 5.0 elective full-course equivalents (FCE) at the 2000-level (equivalent to ten 2000-level courses). With the permission of the Assistant Dean and Executive Director, MBA Programs, students may take up to five 2000-level courses from another graduate unit or participate in a School or University-approved international exchange program. In all cases, the courses selected are subject to the approval of the Assistant Dean and Executive Director, MBA Programs.

Courses for the MBA
Weighting for MGT 1000-level courses is determined by the second digit of the four-digit course number as follows:

<table>
<thead>
<tr>
<th>Second Digit</th>
<th>Course Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>CR/NCR (Credit/No Credit)</td>
</tr>
<tr>
<td>1</td>
<td>one credit hour</td>
</tr>
<tr>
<td>2</td>
<td>two credit hours</td>
</tr>
<tr>
<td>3</td>
<td>three credit hours</td>
</tr>
</tbody>
</table>

The Department should be consulted each session as to course offerings.

1000 Level
MGT 1102H Business Ethics
MGT 1210H Managerial Economics
MGT 1211H Economic Environment of Business
MGT 1212H Global Managerial Perspective
MGT 1222H Managerial Accounting
MGT 1241H Operations Management
MGT 1261H Managerial Negotiations
MGT 1262H Leadership
MGT 1263H Managing People in Organizations
MGT 1291H Foundations of Integrative Thinking
MGT 1292H Integrative Thinking Practicum
MGT 1301H Fundamentals of Strategic Management
MGT 1320H Financial Accounting
MGT 1330H Business Finance
MGT 1350H Managing Customer Value
MGT 1382H Statistics for Management

2000 Level
MGT 2001H Research Project (quarter course)
MGT 2002Y Research Project
MGT 2003H Research Project
MGT 2010H Business-Government Relations
MGT 2011H International Business
MGT 2012H Entrepreneurship
MGT 2015H Special Topics in Strategic Management
MGT 2016H Special Topics in Strategic Management
MGT 2017H Special Topics in Strategic Management
MGT 2018H Special Topics in Strategic Management
MGT 2019H Special Topics in Strategic Management
MGT 2020H Health Sector Strategy & Organizations
MGT 2024H Outsourcing
MGT 2050H Technology/Management Interface
MGT 2052H Management Consulting
MGT 2053H Organizational Strategy
MGT 2054H Technology Strategy
MGT 2055H Cooperative Strategy
MGT 2056H Game Theory and Competitive Strategy
MGT 2057H Venture Capital
MGT 2058H Case Analysis and Presentation
MGT 2080H Special Topics in Strategic Management
MGT 2081H Special Topics in Strategic Management
MGT 2082H Special Topics in Strategic Management
MGT 2083H Special Topics in Strategic Management
MGT 2084H Special Topics in Strategic Management
MGT 2115H Special Topics in Business Economics
MGT 2116H Special Topics in Business Economics
MGT 2117H Special Topics in Business Economics
MGT 2118H Special Topics in Business Economics
MGT 2119H Special Topics in Business Economics
MGT 2122H Business and the Regulatory Environment
MGT 2123H International Business in the World Economy
MGT 2125H Game Theory and Applications for Management
MGT 2126H Real Estate Development
MGT 2127H Economic Environment of International Business
MGT 2128H Real Estate Economics
MGT 2129H Forecasting Models and Econometric Methods
MGT 2140H Special Topics in Business Economics
MGT 2141H Special Topics in Business Economics
MGT 2142H Special Topics in Business Economics
MGT 2202H Planning and Control Systems
MGT 2203H Current Issues in Financial Reporting and Disclosure
MGT 2204H Canadian Tax Practice
MGT 2209H Financial Statement Analysis
MGT 2215H Special Topics in Accounting
MGT 2216H Special Topics in Accounting
MGT 2300H Corporate Financing
MGT 2301H Financial Management
MGT 2302H Security Analysis and Portfolio Management
MGT 2303H Risk Modelling and Financial Trading Strategies
MGT 2304H Financial Institutions and Capital Markets
MGT 2305H International Financial Management
Degree Programs

MGT 2306H Options and Futures Markets
MGT 2307H Advanced Derivatives
MGT 2308H Financial Risk Management
MGT 2309H Mergers and Acquisition
MGT 2310H Analysis and Management of Fixed Income Securities
MGT 2311H Applied Portfolio Management
MGT 2312H Value Investing
MGT 2315H Special Topics in Finance
MGT 2316H Special Topics in Finance
MGT 2317H Special Topics in Finance
MGT 2405H Supply Chain Management
MGT 2406H Operations Management Strategy
MGT 2415H Special Topics in Management Science
MGT 2500H Marketing Strategy
MGT 2501H Global Marketing
MGT 2502H Mass Merchandising
MGT 2503H Strategic Internet Marketing
MGT 2504H Consumer Behaviour
MGT 2505H Integrated Marketing Communication
MGT 2506H Marketing Research
MGT 2507H Marketing Analysis and Decision Making
MGT 2508H Services Marketing
MGT 2509H Marketing High-Tech Products
MGT 2510H Distribution Channel Strategy
MGT 2511H Marketing Financial Services
MGT 2512H Branding
MGT 2513H Pricing
MGT 2515H Special Topics in Marketing
MGT 2516H Special Topics in Marketing
MGT 2517H Special Topics in Marketing
MGT 2518H Special Topics in Marketing
MGT 2520H Special Topics in Marketing
MGT 2601H Organization Design
MGT 2602H Emotionally Intelligent Leadership
MGT 2603H Advanced Negotiations and Conflict Management
MGT 2604H Organization Change and Development
MGT 2605H International Organizational Behaviour
MGT 2606H Designing New Work Organizations
MGT 2607H Managerial Negotiations
MGT 2609H Management of Human Resources
MGT 2610H Industrial Relations
MGT 2612H Managing Talent for Global Operations
MGT 2613H Leadership
MGT 2615H Special Topics in Organizational Behaviour
MGT 2616H Special Topics in Organizational Behaviour
MGT 2618H Special Topics in Organizational Behaviour
MGT 2704H Information Technology Management
MGT 2715H Special Topics in Information Systems
MGT 2800H Management Science
MGT 2801H Management Decision Analysis
MGT 2802H Computer Modelling and Simulation
MGT 2910H Learning How to Learn
MGT 2912H Business Law
MGT 2913H Getting It Done
MGT 2914H Not-for-Profit Consulting
MGT 2915H Multidisciplinary Special Topics
MGT 2916H Multidisciplinary Special Topics
MGT 2917H Multidisciplinary Special Topics
MGT 2918H Multidisciplinary Special Topics
MGT 2920H Top Manager's Perspective
MGT 2921H Using History to Make Strategic Choices

Executive Master of Business Administration

Minimum Admission Requirements
- Admission is restricted to applicants with significant professional work or managerial experience. Applicants are considered under the general regulations of the School of Graduate Studies and must obtain either a satisfactory score for the Executive MBA Diagnostic Tool (EDT) or the Graduate Management Admission Test (GMAT). For further details, refer to the Web site or contact the program office.
- Please note special program fees apply for this program.

Program Requirements
- Within this 13-month program:
  - Students complete 23 courses with an accumulated credit weighting of 11.25.
  - One or more of the course(s) may be substituted by course(s) offered in the regular MBA program at the discretion of the Academic Director.

Courses for the EMBA
The Department should be consulted each session regarding course offerings.

First Session
MGT 5001H Strategy 1
MGT 5003H Personal Leadership 1
MGT 5005H The Business Environment 1
MGT 5012H Special Topics in Strategic Management
MGT 5101H Economics 1
MGT 5201H Accounting 1
MGT 5301H Finance 1
MGT 5401H Business Operations
MGT 5501H Marketing 1
MGT 5601H Organizational Leadership 1
MGT 5801H Quantitative Reasoning for Management

Second Session
MGT 5002H Strategy 2
MGT 5004H Personal Leadership 2
MGT 5006H The Business Environment 2
MGT 5007H International Business
MGT 5009H Topics in Strategic Management
MGT 5010H Industry Analysis Project
MGT 5011H Capstone Project - The Responsible Leader
MGT 5102H Economics 2
MGT 5202H Accounting 2
MGT 5302H Finance 2
MGT 5502H Marketing 2
MGT 5602H Organizational Leadership 2
Global Executive Master of Business Administration

Minimum Admission Requirements
• Admission is restricted to applicants with significant professional work or managerial experience.
• Applicants are considered under the general regulations of the School of Graduate Studies.
• Applicants must also obtain either a satisfactory score for the Executive MBA Diagnostic Tool (EDT) or the Graduate Management Admission Test (GMAT). For further details, refer to the Web site or contact the program office.

Program Requirements
• Within this 18-month program:
  o Students complete 23 courses with an accumulated credit weighting of 11.25
  o Students complete six international modules consisting of two to three intensive weeks in each of the five locations: Europe (Switzerland, Hungary); South America (Brazil, Sao Paulo, Rio de Janeiro); China (Hong Kong, Shanghai); India (Hyderabad, Mumbai); and Canada (Toronto). The program starts and ends with a module in Toronto.
  o The curriculum is closely aligned with courses offered in the Executive MBA program. Between modules, participants continue their academic work by utilizing our electronic learning tools.
  o After successfully completing all modules, participants receive the MBA degree from the University of Toronto.

Courses for the GEMBA
MGT 5001H Strategy 1: Global Strategic Management 1
MGT 5002H Strategy 2: Corporate Strategy
MGT 5004H Personal Leadership: Corporate Leadership
MGT 5005H The Business Environment 1: Corporate Governance
MGT 5006H The Business Environment 2: Professional Responsibilities
MGT 5007H International Business: International Risk Management
MGT 5009H Topics in Strategic Management
MGT 5010H Industry Analysis Project: Developing a Business Plan
MGT 5011H Capstone Project - The Responsible Leader: Growth Project
MGT 5012H Special Topics in Strategic Management
MGT 5101H Economics 1: Economics Introduction
MGT 5102H Economics 2: Political Economy
MGT 5201H Accounting 1
MGT 5202H Accounting 2: International Accounting
MGT 5301H Finance 1: Financial Global Markets
MGT 5302H Finance 2: Corporate Finance
MGT 5401H Business Operations: Supply Chain Management
MGT 5501H Marketing: Creating Customer Value (Marketing)
MGT 5502H Marketing 2
MGT 5601H Organizational Leadership 1: Global Team Leadership
MGT 5602H Organizational Leadership 2: Negotiation
MGT 5801H Quantitative Reasoning for Managers
MGT 5901H Technology Innovation

Master of Finance

Minimum Admission Requirements
• Applicants are admitted under the general regulations, including a four-year undergraduate degree from the University of Toronto or its equivalent with a mid-B average in the final year of undergraduate or prior graduate education.
• Satisfactory score on the Graduate Management Admissions Test (GMAT) or completion of all three levels of the Charter Financial Analyst (CFA) designation prior to the application deadline.
• At least two years of full-time work experience in finance. In special circumstances, other substantial experiences will be considered in lieu of the work experience in finance, but only when accompanied by demonstrated exceptional academic and professional potential. Generally, applicants are not accepted immediately after completion of their undergraduate education, unless they have significant prior full-time work experience.
• English Language Facility. Satisfactory performance on one of the following tests:
  o Test of English as a Foreign Language (TOEFL) and Test of Written English (TWE) with the following minimum scores:
    o Paper-based TOEFL exam: 600 with a minimum score of 5.0 on the TWE
    o Computer-based TOEFL exam: 250 with a minimum score of 5.0 on the TWE
    o Internet-based TOEFL exam: overall score of100 with 22 on the writing section
  • Equivalent performance on other tests (IELTS, MELAB) may be considered in special circumstances, but the TOEFL is preferred.
    o IELTS – minimum score required is 7.0
    o MELAB – minimum score required is 85
    o COPE – minimum score required is 4 (with at least 1 in each component and 2 in the writing component)

Program Requirements
• Within this 20-month program (two academic years) students:
  o must complete a structured sequence of 14 courses taken over five semesters (including summer). No advanced standing will be granted for previous academic work completed or professional designations earned.

Management 255
Degree Programs

Courses for the MF

- MGT 4310H Foundations of Finance
- MGT 4311H Corporate Finance and Valuation
- MGT 4312H Derivatives
- MGT 4313H Firms, Deals and the Economy
- MGT 4314H Risk Management and Financial Institutions
- MGT 4315H Investment Banking
- MGT 4316H Financial Reporting and Financial Statement Analysis
- MGT 4317H Analysis of Fixed Income Markets
- MGT 4318H Finance Theory
- MGT 4319H Portfolio Management and Trading Risks
- MGT 4320H Advanced Accounting Topics for Finance
- MGT 4321H Leadership and Decision Making in Finance
- MGT 4322H Applications of Derivatives Products
- MGT 4323H Investments

Doctor of Philosophy

Minimum Admission Requirements

- Applicants are admitted under the general regulations.
- Students are expected to acquire a breadth of knowledge across each of the six disciplines (Accounting, Finance, Marketing, Operations Management, Organizational Behaviour and Human Resource Management, and Strategic Management).
- Some depth in the cognate disciplines relevant to the field of specialization 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 breadth and 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 course work 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.
  - Proof of English language facility.

Program Requirements

- Students spend the first two years on campus, registered as full time students. During this time, they are normally expected to complete course work. The program consists of a major field and two minor fields of study.
- Within this PhD program, students normally:
  - Complete a minimum of 4.0 full-course equivalents (FCE) to satisfy requirements for one major field and two minor fields of study.
  - A minimum of 2.0 FCE comprise the major field. These will normally be taken from 3000-level Management courses, but additional courses from other departments may be required.
  - The two minor fields are usually taken in cognate departments. Each minor field comprises at least 1.0 FCE. With special permission from the Rotman School of Management, students may be exempted from 1.0 FCE for one of the minor fields on the basis of graduate-level work completed at another university.
  - In order to gain exposure to the breadth of the MBA program, 1.5 FCE chosen from the following list (or their equivalents) are required:
    - MGT 1221H Accounting I or MGT 1222H Managerial Accounting
    - MGT 1301H Fundamentals of Strategic Management
    - MGT 1330H Business Finance
    - MGT 1350H Marketing
    - MGT 1362H Managing People in Organizations
    - The 1.5 FCE are chosen in consultation with the Area PhD Supervisor. The choice excludes any course from the student's major field of study. No student will be allowed to defend a dissertation proposal until the distribution requirements are completed.
    - Effective March 2004, the MBA distribution requirements in the PhD program were suspended for two years. The suspension may be extended for the 2008/2009 academic year. All students registered at that time and newly admitted students since the 2004/2005 academic year will not be subjected to the MBA distribution requirements. In the meantime, an alternate suitable replacement that meets the objective of the MBA distributions is being developed.
  - A student is expected to be qualified in the three basic disciplines essential to the study of Management: economics, behavioural science, and quantitative analysis/statistics.
  - Upon completion of the courses in the major and minor fields, the student is expected to pass comprehensive examinations in the major field.
  - A thesis embodying the results of original investigation must be submitted and defended at a final oral examination in accordance with the regulations of the School of Graduate Studies.
Courses for the PhD
The Department should be consulted each session as to course offerings.

Courses normally restricted to PhD students
MGT 3001H Research Methods in Strategic Management
MGT 3002H Advanced Topics in Strategy and Organization
MGT 3003H Advanced Topics in Strategy and Economics
MGT 3004H Advanced Topics in International Strategy
MGT 3005H Strategic Management Workshop
MGT 3020H Financial Accounting: Theory and Empirical Research
MGT 3021H Managerial Accounting Research Methods
MGT 3022H Auditing Seminar
MGT 3023H Topics in Accounting Research
MGT 3025H Workshop in Accounting
MGT 3030H Financial Theory I
MGT 3031H Financial Theory II
MGT 3032H Empirical Methods in Finance
MGT 3033H Current Topics in Finance
MGT 3034H Capital Markets Workshop
MGT 3041H Seminar in Operations Management
MGT 3045H Advanced Topics in Operations Management I
MGT 3046H Advanced Topics in Operations Management II
MGT 3051H Marketing Theory I: Consumer Behaviour
MGT 3052H Marketing Theory II: Strategy
MGT 3053H Behavioural Research Methods in Marketing
MGT 3054H Current Topics in Consumer Behaviour
MGT 3055H Econometric Methods in Marketing
MGT 3056H Current Topics in Marketing Strategy
MGT 3057H Workshop in Marketing (Credit/No Credit)
MGT 3058H The Psychology of Judgement and Decision Making
MGT 3060H Advances in Human Resource Management
MGT 3062H Methods and Research in Organizational Behaviour and Industrial Relations
MGT 3063H Advanced Topics in Organization Theory
MGT 3064H Advanced Topics in Organizational Behaviour
MGT 3065H New Directions in Organizational Research
MGT 3090H Reading Course in Approved Field
MGT 3091H Reading Course in Approved Field

Graduate Faculty

Full Members
Varouj Alavazian - BS, MA, PhD
Terry Amburgey - BS, MA, PhD
Joel Amernic - BSc, MBA, FCA
Thomas Astebro - MSc, TECHLIC, PhD
Igor Averbakh - MSc, PhD
Joel Baum - BA, MBA, PhD
Jennifer Berdahl - BA, MA, MA, PhD
Oded Berman - BA, SM, PhD
Laurence Booth - BSc, MA, MBA, DBA
Sandford Borins - BA, MPP, PhD
Donald Brean - BA, BBA, MBA, MSc, PhD
Leonard Brooks - BCom, MBA, FCA, CA
Jeffrey Callen - BA, MBA, PhD
Kenneth Corts - BA, MA, PhD
Stephane Cote - BSc, MA, PhD
Joseph D’Cruz - BA, MBA, DBA
Jin-Chuan Duan - BSc, MBA, MSc, PhD
Alexander Dyck - BA, PhD
Ramy Elitzur - BA, MBA, MPhil, PhD, CPA, CMA
Richard Florida – BA, PhD
Brian Golden - BS, MS, PhD
David Goldreich - BS, MSIA, MS, PhD
Daniel Greeno - BCom, MBA, PhD
Hugh Gunz - BSc, DPhil, PhD
Paul Halpern - BCom, MBA, PhD
Scott Hawkins - BA, MS, PhD
Wailid Hejazi - BA, MA, PhD
Ole-Kristian Hope - BA, MBA, PhD
Ignatius Horstmann - BA, PhD
John Hull - BA, MA, MA, PhD
Douglas Hyatt - BA, MA, PhD
R. Michael Jalland - BA, PhD
Raymond Kan - BBA, MBA, PhD
Eric Kirzner - BA, MBA
Dmitry Krass - BS, MSc, PhD
Gary Latham - BA, MS, PhD, FRSC
Sharmistha Law - BA, BS, MS, PhD
Yue Li - BSc, MBA, PhD
Jan Mahrt-Smith - BSc, PhD
Roger L. Martin - AB, MBA (Dean)
Susan McCracken - BCom, PhD, CA
Thomas McCurdy - BA, MA, PhD
William McEvily - BS, PhD
Anita McGahan – BA, MBA, PhD
Nitin Mehta - BTech, MS, MSIA, PhD
Ulrich Menzefricke - MBA, DBA
Joseph Milner - BS, MS, PhD
Matthew Mitchell – BS, MA, PhD
Mihnea (Michael) Moldoveanu - BSc, MSc, DBA
Sridhar Moorthy - BSc, MBA, MS, PhD
Joanne Oxley - BA, BSc, MBA, MA, PhD
Peter Pauly - MA, PhD (Vice-Dean, Research & Academic Resources)
Rebecca Reuber - BA, MSc, PhD, CIA
Gordon Richardson - BA, MBA, PhD
Marcel Rindisbacher - BS, MSc, PhD
Wendy Rotenberg - BA, MBA, PhD
Maria Rotundo - BA, MIR, PhD

Degree Programs
Degree Programs

Timothy Rowley - BA, MBA, PhD
Alan Sak - BA, MSc, PhD
Dan Segal - BA, PhD
Mengze Shi - BS, MA, MS, PhD
Brian Silverman - AB, SM, MA, PhD
Waldemar Smieliauskas - BS, MS, PhD
Dilip Soman - BE, MBA, PhD
Olav Sorenson – AB, MA, PhD
Mark Stable - BA, MA, PhD, Director School of Public Policy and Governance
Andrew Stark - BA, MSc, MA, PhD
William Strange - BA, MA PhD
Mihkel Tombak - BASc, MBA, AM, PhD
Daniel Trefler - BA, MPH, PhD
Anil Verma - BTech, MBA, PhD
Qing (Kevin) Wang - BS, MA, PhD
Jason Wei - BSc, MBA, PhD
Anthony Wensley - BA, PGCE, MA, MBA, PhD
Alan White - BEng, MBA, PhD
Glen Whyte - LLB, MBA, MPhil, MA, PhD
Jia Lin Xie - BA, MBA, PhD
Ping Zhang - BSc, MBA, MAcc, PhD

Members Emeriti
Richard Bird - BA, MA, PhD, FRSC
John Crispo - BCom, PhD
Martin Evans - BSc, MScTech, MIA, PhD
James Fleck - BA, DBA
Myron Gordon - BA, MA, PhD, LLD, FRSC
Harvey Kolodny - BEng, MBA, DBA, PEng
Andrew Mitchell - BA, PhD
Daniel Ondrack - BComm, MBA, PhD
Albert Safarian - BA, PhD, FRSC
John Sawyer - BCom, MA, PhD
Thomas Wilson - BA, AM, PhD, FRSC

Associate Members
Philipp Afeche – BA, MS, PhD
Pankaj Aggarwal - BA, MBA, MBA, PhD
Ajay Agrawal - BASc, MEng, MBA, MA, PhD
Opher Baron - BSc, MBA, PhD
Bernardo Soares Blum - BA, MA, MA, PhD
Sabrina Buti – ME, MMEE, MPhil, PhD
Tiziana Casciaro – BA, MS, PhD
Feng Chen – BA, MSEd, MBA, PhD
Andrew Tat Tin Ching - BEcon, MA, PhD
Kristina Dahlin - MSc, PhD
Sergei Davydenko - MSc, ME, PhD
Gus De Franco - HBA, MBA, PhD
Sanford De Voe – BA, PhD
Francois Derrien - HEC, MSc, PhD
Craig Andrew Doidge - BComm, MSC, PhD
Esther Eiling - BA, MSc, PhD
April Franco – BA, MA, PhD
Garth Frazer - BMath, BEng, MA, MPhil, PhD
Alberto Galasso - PhD
Avi Goldfarb - BAH, MA, PhD
Lu Han - BA, MA, PhD
Kyeongheui Kim - BA, MBA, PhD
Lisa Kramer - BBA, PhD

Mara Lederman - BA, PhD
Geoffrey Leonardielli - BA, MA, PhD
Hai Lu - PhD
Nina Mazar - PhD
Julie McCarthy - BA, MA, PhD
Sergio Meza - BSc, MBA, PhD
Samantha Montes - BA, MA, PhD
John Oesch - BSc, BEd, MEd, MBA, PhD
Lukasz Pomorski – MSc, MBA, PhD
Timothy Simcoe - AB, MA, PhD
Keneilian Tian - BSc, MSc, PhD
Soo Min Toh - BBS, PhD
John Peter Trougakos - BS, MBA, PhD
I-Wen (Claire) Tsai – BBA, MBA, PhD
Mark Weber - BA, MA, MBA, PhD
Andrea Wojnicki - BComm, MBA, DBA
Moon Hung (Franco) Wong - PhD, MA
Baohua Xin - PhD
Min Zhao – BA, MA, PhD
Chenbo Zhong – BA, MA, PhD
David Zweig - BA, MSc, PhD
Materials Science and Engineering  MMS

Faculty Affiliation
Applied Science and Engineering

Degree Programs Offered
Materials Science and Engineering – MASc, MEng, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Biomedical Engineering, see p. 418
   • Materials Science and Engineering, MASc, PhD
2. Environmental Engineering, see p. 441
   • Materials Science and Engineering, MASc, MEng, PhD

Overview
The Department of Materials Science and Engineering offers graduate programs leading to the degrees of Master of Applied Science, Master of Engineering, and Doctor of Philosophy. Graduate courses and research opportunities are offered to qualified students in a wide range of subjects.

Typical subjects in chemical metallurgy involve a study of the equilibria existing during the reduction of oxides with carbon and metals, properties of iron and steelmaking slags, the fundamental properties of fused salt solutions, fused salt electrolysis of reactive metals, kinetics of high-temperature reactions, mathematical modelling of metallurgical processes, process metallurgy, and hydrometallurgy.

Typical physical metallurgy and materials science subjects deal with the structure and properties of metallic, ceramic, and polymeric materials in such fields as plastic deformation, surface properties, electron microscopy, biomaterials, nuclear materials, metal-matrix composites (MMCs), metallic glasses, corrosion, fatigue, welding and bonding, phase transformations and solidification. These studies are all related to the general problem of understanding structure-property-processing relationships in materials.

Contact and Address
Web: www.mse.utoronto.ca
E-mail: mse@ecf.utoronto.ca
Telephone: (416) 978-3012
Fax: (416) 978-4155

Department of Materials Science and Engineering
Room 140, Wallberg Building
University of Toronto
Toronto, Ontario M5S 3E4
Canada

Degree Programs
Master of Applied Science

Minimum Admission Requirements
• Students are accepted under the general regulations.
• For students whose primary language is not English, the department requires a TOEFL (Test of English as a Foreign Language) with the following minimum scores. Paper-based TOEFL: minimum score of 580 and 4 on the TWE. Computer-based TOEFL: minimum score of 237 and 4 on the essay rating component. Internet-based TOEFL: minimum score of 93/120 and 22/30 on the writing and speaking sections.

Program Requirements
• The program of study normally includes 2.0 full-course equivalents, including the MASc Graduate Research Seminar, the Graduate Ethics Seminar, and a thesis. Normally, the course work selected includes the departmental seminar, which is a half-year course, and three half-courses, one of which is normally taken inside the department.
• The required thesis is based upon research work carried out in the department in the fields of chemical metallurgy, physical metallurgy, or materials science. The thesis must be presented at an oral examination.

Master of Engineering

Minimum Admission Requirements
• Students are accepted under the general regulations.
• For students whose primary language is not English, the department requires a TOEFL (Test of English as a Foreign Language) with the following minimum scores. Paper-based TOEFL: minimum score of 580 and 4 on the TWE. Computer-based TOEFL: minimum score of 237 and 4 on the essay rating component. Internet-based TOEFL: minimum score of 93/120 and 22/30 on the writing and speaking sections.

Program Requirements
• A student enrols in a field of study in consultation with a professor who will act as advisor throughout the student's program.
• For students with adequate undergraduate preparation, the normal program will include 5.0 full-course equivalents (FCE), of which 2.5 FCE must be taken within MSE; a project may be substituted for 1.5 FCE (in this case, 1.5 of the 3.5 FCE must be taken within MSE). The project must be presented at an oral examination.
Degree Programs

Doctor of Philosophy

Minimum Admission Requirements
- For students whose primary language is not English, the department requires a TOEFL (Test of English as a Foreign Language) with the following minimum scores. Paper-based TOEFL: minimum score of 580 and 4 on the TWE. Computer-based TOEFL: minimum score of 237 and 4 on the essay rating component. Internet-based TOEFL: minimum score of 93/120 and 22/30 on the writing and speaking sections.
- 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 Materials Science and Engineering Graduate Studies office. A student who is permitted such a transfer must complete only the PhD Graduate Research Seminar in addition to the four courses completed in the MASc program.

Program Requirements
- Students are normally expected to have completed the master's program before entering the PhD program.
- The major subject in a program will be chemical metallurgy, physical metallurgy, or materials science.
- The program of study normally includes 2.0 full-course equivalents (FCE), including the PhD Graduate Research Seminar, the Graduate Ethics Seminar (unless already taken at the MASc level), and a thesis. 0.5 of the 1.5 FCE is normally be taken inside the department.
- Within 12 months of initial enrolment, all PhD students must pass a general qualifying examination based on the course material taken within the department and on background knowledge in the student's field of specialization.
- The required thesis is based upon research work carried out in the department in the fields of chemical metallurgy, physical metallurgy, or materials science.

Courses
A schedule is available from the Coordinator of Graduate Studies at the beginning of the fall session listing the time and room location for each course offered. 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.
Note: Not all courses are offered every year. Please consult the department for a listing of courses being offered this year.

Materials Science
- MSE 550H Advanced Physical Properties of Structural Nanomaterials
- MMS 1000H Graduate Research Seminar MASc
- MMS 1013H Growth and Characterization of Semiconductors
- MMS 1014H Interfacial Phenomena
- MMS 1015H Mechanical Properties of Solids I
- MMS 1016H Mechanical Properties of Solids II
- MMS 1018H Phase Transformations
- MMS 1020H Environmentally Induced Cracking
- MMS 1022H Special Topics in Materials Science I
- MMS 1023H Special Topics in Materials Science II
- MMS 1024H Interface and Nanophase Engineering
- MMS 1025H Non-Crystalline Solids
- MMS 1026H Analytical Electron Microscopy
- MMS 1027H Finite Element Analysis and Design of Metallurgical Systems
- MMS 1028H Advanced Materials Science
- MMS 1029H Electrochemical Synthesis of Nanomaterials
- MMS 2000H Graduate Research Seminar PhD
- MMS 2013H Materials and Manufacturing
- JMZ 1704H Polymer Process Engineering
- JTC 1020H Ceramics
- JTC 1331H Biомaterials Science

Metallurgy
- MMS 1000H Graduate Research Seminar MASc
- MMS 2000H Graduate Research Seminar PhD
- MMS 2006H Molten Salt Electrolysis
- MMS 2007H Iron and Steel Making—selected topics
- MMS 2008H High Temperature Metallurgical Fluids
- MMS 2014H Non-Ferrous Extraction Metallurgy
- MMS 2017H Welding Metallurgy
- MMS 2018H Welding Processes and Testing
- MMS 2020H Mathematical Modelling in Materials Processing
- MMS 2022H Special Topics in Metallurgy I
- MMS 2023H Special Topics in Metallurgy II

Graduate Faculty

Full Members
- Stavros Argyropoulos - DiplEng, MEng, PhD, PEng
- Thomas Coyle - BSc, BA, ScD
- Uwe Erb - Dipling
- Marc Grynpas - MSc, PhD
- Glenn Hibbard - BASc, PhD, PEng
- Nazir Kherani - BASc, MASc, PhD, PEng
- Keryn Lian - BASc, MASc, PhD
- Zheng-Hong Lu - BSc, MSc, PhD
- Hani Naguib - BSc, ME, PhD, PEng, Canada Research Chair
- Jun Nogami - BASc, MASc, PhD
- Thomas North - BSc, MSc, PhD, PEng

*Courses which may continue over a program. The course is graded when completed.
Degree Programs

Doug Perovic - BASc, MASc, PhD, PEng (Chair)
Harry Ruda - BSc, ARSM, PhD
Steven Thorpe - BASc, MASc, PhD
Torstein Utigard - BSc, MASc, PhD, PEng
Zhirui Wang - BEng, MSc, PhD (Coordinator of Graduate Studies)

Members Emeriti
Karl Aust - BASc, MASc, PhD, FASM, FRSC, PEng
Brian Cox - BA, MA, PhD
Ursula Franklin - PhD, LLD, DSc, DDN, CC, FRSC,
University Professor Emeritus
Douglas Lavers - BSc, MASc, PhD, FIEEE, PEng,
Eugene Polistuk Chair in Electromagnetic Design
Alexander Mclean - BSc, PhD, PEng
Robert Pilliar - BASc, PhD, PEng
John Rutter - MA, PhD, PEng
Iain Sommerville - BSc, PhD, ARCS

Associate Members
Roland Bergman - BASc, MASc, PEng
Eli Sone - PhD, MS, BSc
Mathematical Finance  MMF

Faculty Affiliation
School of Graduate Studies

Degree Programs Offered
Mathematical Finance – MMF

Overview
Financial engineering is one of the fastest growing areas of applied mathematics. In the Master of Mathematical Finance 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 with employees of the sponsoring firm to experience how financial mathematics impacts the decision-making processes of a financial services organization.

Contacts and Address
E-mail: math.finance@utoronto.ca
Web: www.mmf.utoronto.ca
Telephone: (416) 946-5206
Fax: (416) 946-5205

Mathematical Finance Program
Suite 219, 720 Spadina Avenue
University of Toronto
Toronto, Ontario  M5S 2T9
Canada

Degree Programs

Master of Mathematical Finance

Minimum Admission Requirements
- Students are admitted under the general regulations of the School of Graduate Studies.
- Applicants must have a four-year University of Toronto bachelor’s degree, or its equivalent, 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 facility 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)
  - Computer-based TOEFL exam: 237 and 5 on the essay rating component
  - 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.

Program Requirements
- The program of study begins in mid-August and will normally extend over twelve consecutive months during which the student is full-time.
- The program 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 courses listed below.
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

MMF 1900Y Internship (Credit/No Credit)
MMF 1910H Introduction to Financial Industry (Credit/No Credit)
MMF 1914H Information Technology (Credit/No Credit)
MMF 1915H Introduction of Financial Products (Credit/No Credit)
MMF 1920H Investment and Finance
MMF 1921H Operations Research
MMF 1922H Statistics for Finance I
MMF 1923H Financial Markets and Corporate Policy
MMF 1926H Workshop in Mathematical Finance
MMF 1927H Workshop in Mathematical Finance
MMF 1941H Stochastic Analysis
MMF 1943Y Communication
MMF 1952Y Pricing Theory
MMF 2000H Risk Management
MMF 2011H Advanced Stochastic Processes
MMF 2012H Volatility Modelling and Forecasting
MMF 2021H Numerical Methods for Finance
MMF 2025H Risk Management Laboratory

Graduate Faculty

Full Members
Andrey Feuerverger - BSc, PhD
Kenneth Jackson - BSc, MSc, PhD
Sebastian Jaimungal - BASc, MSc, PhD
Roy Kwon - BA, MS, PhD
Thomas McCurdy - BA, MA, PhD
Luis Seco - PhD (Director)

Associate Members
Alexander Kreinin - MSc, PhD
Jason Pilling - BSc, MMF
Graham Pugh - BA, MA, PhD
Dan Rosen - BASc, MASc, PhD
Dmitri Rubisov - MEng, PhD
Johan Tuenter - BSc, MSc, PhD

Courses which may continue over a program. The course is graded when completed.
Degree Programs

Mathematics  MAT

Faculty Affiliation
Arts and Science

Degree Programs Offered
Mathematics – MSc, PhD

Overview
The Department of Mathematics offers opportunities for research – leading to the Master of Science and Doctor of Philosophy degrees - in the fields of pure mathematics and applied mathematics, including, but not restricted to, the fields of 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 (in cooperation with the Department of Statistics), combinatorics, optimization, control theory, dynamical systems, computer algebra, cryptology, and mathematical finance.

More information about this program and courses may be found in the brochure Graduate Studies in Mathematics at the University of Toronto.

Contact and Address
Web: www.math.toronto.edu/graduate
E-mail: grad-info@math.toronto.edu
Telephone: (416) 978-7894
Fax: (416) 978-4107

Department of Mathematics
Room 6290, 40 St. George Street
University of Toronto
Toronto, Ontario M5S 2E4
Canada

Degree Programs

Master of Science

Minimum Admission Requirements
- SGS general regulations and evidence of an excellent academic background and mathematical ability.

Program Requirements
- Full-time students are accepted into a 12-month, 16-month, or 24-month program. The program may be completed on a part-time basis.
- Students in the 12-month program are required either (a) to successfully complete 3.0 approved full-course equivalents (FCE) and a supervised research project (MAT 4000Y), or its equivalent, or (b) successfully complete 2.0 approved FCE and submit an acceptable thesis. Two approved half-year courses are considered the equivalent of a full-year course. Two prerequisite courses may, with approval, be substituted for one program course. Students may, with approval, take courses outside the department as part of a coherent program.
- Students who do not have a complete undergraduate background in mathematics may be accepted into a 16-month or 24-month program which includes an approved selection of prerequisite and other courses in addition to the requirements of the 12-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.
- Students who undertake the MSc part-time must, at a minimum, satisfy the requirements of the 12-month program.

Doctor of Philosophy

Minimum Admission Requirements
- Normally a master's degree from a recognized university. However, exceptionally strong BSc students may apply for direct admission to the PhD program. In all cases 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.

Program Requirements
- Program is normally completed in four years of full-time study.
- At least 6.0 half-courses or 3.0 full-course equivalents (FCE).
- Students must pass a comprehensive examination in basic mathematics before beginning an area of specialization. This examination should be taken as soon as possible, and not later than the beginning of the third session of PhD study. The usual examination covers the three general areas of analysis, algebra, and topology, at the level of the first-year graduate courses offered by the department in these subjects. Students planning to specialize in applied mathematics must take the analysis and/or algebra portion of the comprehensive examination, but may substitute from several areas of applied mathematics for the remaining portions.
- Students must pass a specialist oral examination or give a seminar presentation in their particular field 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.
<table>
<thead>
<tr>
<th>Courses</th>
<th>MAT 1312H Topics in Geometry</th>
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<tbody>
<tr>
<td>MAT 1000Y Real Analysis</td>
<td>MAT 1313Y Seminar in Geometry</td>
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<tr>
<td>MAT 1001H Complex Analysis</td>
<td>MAT 1314H Introduction to Noncommutative Geometry</td>
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<tr>
<td>MAT 1002H Topics in Complex Variables</td>
<td>MAT 1340H Differential Topology</td>
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<tr>
<td>MAT 1003H Theory of Several Complex Variables</td>
<td>MAT 1341H Differentiable Manifolds and Applications</td>
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<tr>
<td>MAT 1004H Theory of Approximation</td>
<td>MAT 1342H Introduction to Differential Geometry</td>
</tr>
<tr>
<td>MAT 1005H Fourier Analysis</td>
<td>MAT 1343H Riemannian Manifolds</td>
</tr>
<tr>
<td>MAT 1006H Topics in Real Analysis</td>
<td>MAT 1344H Symplectic Geometry</td>
</tr>
<tr>
<td>MAT 1008H Functions of a Complex Variable</td>
<td>MAT 1345H Basic Algebraic Topology</td>
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<tr>
<td>MAT 1010H Functional Analysis</td>
<td>MAT 1346H Homotopy Theory</td>
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<tr>
<td>MAT 1011H Introduction to Linear Operators</td>
<td>MAT 1347H Topics in Symplectic Geometry and Topology</td>
</tr>
<tr>
<td>MAT 1012H Real Analysis II</td>
<td>MAT 1350H Topics in Algebraic Topology I</td>
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<tr>
<td>MAT 1013H Theory of Several Complex Variables II</td>
<td>MAT 1351H Topics in Homotopy Theory</td>
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<tr>
<td>MAT 1015H Topics in Operator Theory</td>
<td>MAT 1352H Topics in Algebraic Topology II</td>
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<tr>
<td>MAT 1016Y Topics in Operator Algebras</td>
<td>MAT 1355H Singularity Theory</td>
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<tr>
<td>MAT 1017H Introduction to K-theory for Operator Algebras</td>
<td>MAT 1359H Moduli Spaces of Flat Connections</td>
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<tr>
<td>MAT 1034H Topics in Harmonic Analysis</td>
<td>MAT 1360H Complex Manifolds</td>
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<tr>
<td>MAT 1035H C* Algebras</td>
<td>MAT 1392H Algebra Seminar</td>
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<tr>
<td>MAT 1037H Von Neumann Algebras</td>
<td>MAT 1399H Advanced Point Set Topology</td>
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<tr>
<td>MAT 1044H Potential Theory</td>
<td>MAT 1403H Model Theory</td>
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<tr>
<td>MAT 1045H Topics in Ergodic Theory</td>
<td>MAT 1404H Introduction to Model Theory and Set Theory</td>
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<tr>
<td>MAT 1051H Introduction to Ordinary Differential Equations</td>
<td>MAT 1430H Set Theory</td>
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<tr>
<td>MAT 1052H Topics in Ordinary Differential Equations</td>
<td>MAT 1435H Infinitary Combinatorics</td>
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<tr>
<td>MAT 1060H Partial Differential Equations I</td>
<td>MAT 1436H Large Cardinals, Structure Theory of Ideals and Applications</td>
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<tr>
<td>MAT 1061H Partial Differential Equations II</td>
<td>MAT 1448H Topics in Set Theoretic Topology</td>
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<tr>
<td>MAT 1062H Topics in Partial Differential Equations I</td>
<td>MAT 1449H Seminar in Foundations</td>
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<tr>
<td>MAT 1063H Topics in Partial Differential Equations II</td>
<td>MAT 1450H Topics in Foundations</td>
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<tr>
<td>MAT 1075H Differential Analysis</td>
<td>MAT 1499H Teaching Large Mathematics Courses (Credit/No Credit)</td>
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<tr>
<td>MAT 1100Y Algebra</td>
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<td>MAT 1101H Topics in the Theory of Groups</td>
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<td>MAT 1103H Topics in Algebra I</td>
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<td>MAT 1104H Topics in Algebra II</td>
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<td>MAT 1109H Classical Groups</td>
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<td>MAT 1110H Algebraic Groups</td>
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<tr>
<td>MAT 1120H Lie Groups and Lie Algebras I</td>
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<tr>
<td>MAT 1121H Lie Groups and Lie Algebras II</td>
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<tr>
<td>MAT 1122H Lie Groups and Representations I</td>
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<tr>
<td>MAT 1124Y Topics in Matrix Theory</td>
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<td>MAT 1126H Lie Groups and Fluid Dynamics</td>
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<td>MAT 1155H Commutative Algebra</td>
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<td>MAT 1190H Algebraic Geometry</td>
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<tr>
<td>MAT 1191H Topics in Algebraic Geometry</td>
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<tr>
<td>MAT 1194H Algebraic Curves</td>
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<tr>
<td>MAT 1195H Elliptic Curves and Cryptography</td>
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<tr>
<td>MAT 1196H Representation Theory</td>
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<td>MAT 1197H Automorphic Forms and Representation Theory I</td>
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<tr>
<td>MAT 1198H Automorphic Forms and Representation Theory II</td>
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<tr>
<td>MAT 1199H Automorphic Forms</td>
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<tr>
<td>MAT 1200H Algebraic Number Theory</td>
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<tr>
<td>MAT 1202H Analytic Number Theory</td>
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<tr>
<td>MAT 1203H Computational Aspects of Number Theory</td>
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<tr>
<td>MAT 1210H Topics in Number Theory</td>
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<td>MAT 1299H Point Set Topology</td>
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<td>MAT 1300Y Topology</td>
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<td>MAT 1302H Combinatorial Theory</td>
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<td>MAT 1303H Combinatorial Designs</td>
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<td>MAT 1309H Geometrical Inequalities</td>
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<td>Applied Mathematics</td>
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<td>MAT 1500Y Applied Analysis</td>
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<td>MAT 1501H Equations and Variational Calculus</td>
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<td>MAT 1502H Dynamical Systems and Stochastic Analysis</td>
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<td>MAT 1507H Asymptotic and Perturbation Methods</td>
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<td>MAT 1508H Techniques of Applied Mathematics</td>
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<td>MAT 1520H Wave Propagation</td>
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<tr>
<td>MAT 1525Y Inverse Problems of X-Ray and Radar Imaging</td>
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<tr>
<td>MAT 1638H Fluid Mechanics</td>
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<td>MAT 1639Y Topics in Fluid Mechanics</td>
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<tr>
<td>MAT 1700H General Relativity</td>
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<td>MAT 1705H Foundations of Classical Mechanics</td>
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<td>MAT 1710H Group Theory and Quantum Mechanics</td>
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<td>MAT 1711H Topics in Quantum Mechanics</td>
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<td>MAT 1722H C* Algebras and Quantum Mechanics</td>
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<tr>
<td>MAT 1723H Foundations of Quantum Mechanics</td>
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<td>MAT 1724H Functional Analysis in Quantum Mechanics</td>
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<tr>
<td>MAT 1725Y Scattering Theory</td>
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<tr>
<td>MAT 1739Y Topics in Mathematical Physics</td>
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<tr>
<td>MAT 1750H Computational Mathematics</td>
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<td>MAT 1751H Topics in Computational Mathematics</td>
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<tr>
<td>MAT 1760H Computer Algebra</td>
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<td>MAT 1761H Algorithms in Algebraic Geometry</td>
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<tr>
<td>MAT 1839H Optimization and Control</td>
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<td>MAT 1840H Control Theory</td>
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<tr>
<td>MAT 1843H Mathematics of Pattern Recognition</td>
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</table>
Degree Programs

MAT 1844H Nonlinear Dynamical Systems
MAT 1845H Dynamical Systems
MAT 1846H Topics in Dynamical Systems
MAT 1847H Holomorphic Dynamics
MAT 1855H Mathematical Economics
MAT 1856H Mathematical Finance
MAT 1880H Case Studies in Applied Mathematics

Individual Reading Courses
MAT 1900Y Readings in Pure Mathematics
MAT 1901H Readings in Pure Mathematics
MAT 1902H Readings in Applied Mathematics
MAT 1950Y Readings in Applied Mathematics
MAT 1951H Readings in Applied Mathematics
MAT 1952H Readings in Applied Mathematics
MAT 2000Y Readings in Theoretical Mathematics
MAT 2001H Readings in Theoretical Mathematics I
MAT 2002H Readings in Theoretical Mathematics II

MSc Project
MAT 4000Y+ Supervised Research Project

Graduate Faculty

Full Members
Peter Abrams - BS, PhD
Omer Angel - PhD
Sergey Arkhipov - PhD
James Arthur - BSc, MSc, PhD, FRS, FRSC, University Professor
Dror Bar-Natan - BSc, PhD
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Ilia Binder - BSc, MS, PhD
John Bland - BSc, MSc, PhD
Valentin Blomer - PhD
Thomas Bloom - BSc, MA, PhD, FRSC
Ragnar-Olaf Buchweitz - Dipl, DrRerMat
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Boris Khesin - MSc, PhD
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Stephen Kudla - BA, MA, PhD
Joseph Lorimer - BSc, MSc, PhD
Mikhail Lyubich - MS, PhD
Robert McCann - BS, PhD
Eckhard Meinrenken - Dipl, PhD
Eric Mendelsohn - BSc, MSc, PhD
Grigory Mikhalkin - BA, PhD
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William Weiss - BSc, MSc, PhD
Michael Yampolsky - MSc, PhD

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H Chandler Davis
Erich Ellers
Donald AS Fraser - BA, MA, MA, PhD, DMath, FRSC
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J Stephen Halperin - BSc, MSc, PhD, FRSC
Wahidul Haque - MA, MS, PhD
Velimir Jurdjevic - BS, MS, PhD
Ivan Kupka
David Masson
James McCool - BSc, PhD
Kunio Murasugi
Paul Rooney

+Extended course. For academic reasons, course work is extended into session following academic session in which course is offered.
Degree Programs

Dipak Sen - MSc, DSc
Richard Sharpe - BSc, MA, PhD
F Arthur Sherk
Stuart Smith

Associate Members
Kiumars Kaveh - BSc, PhD
Raphael Ponge - BSc, MSc, PhD
Degree Programs

Mechanical and Industrial Engineering  MIE

Faculty Affiliation
Applied Science and Engineering

Degree Programs Offered
Mechanical and Industrial Engineering - MASc, MEng, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Biomedical Engineering, see p. 418
   - Mechanical and Industrial Engineering, MASc, PhD
2. Environmental Engineering, see p. 441
   - Mechanical and Industrial Engineering, MASc, MEng, PhD
3. Knowledge Media Design, see p. 462
   - Mechanical and Industrial Engineering, MASc, MEng, 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 dynamic systems, vibrations, controls, robotics, solid mechanics, thermodynamics, combustion, heat transfer, fluid mechanics, environmental engineering, design, computer-aided engineering, flexible manufacturing, enterprise integration, information systems, fuzzy logic, operations research, production planning and scheduling, human factors/ergonomics, and other related topics.

The Master of Applied Science degree program provides students with an opportunity to pursue research-intensive advanced studies in a particular field of interest.

The Master of Engineering degree program is designed for students preparing for advanced professional activity; it is not a research-oriented degree.

The Doctor of Philosophy degree program is for students anticipating a career in which they will be performing or directing research at the most advanced level.

Contacts and Address
Web: www.mie.utoronto.ca
E-mail: gradoffice@mie.utoronto.ca
Fax: (416) 978-3453

Degree Programs

Master of Applied Science

Minimum Admission Requirements
- Applicants must normally have a minimum average of B+, or equivalent, in each of the final two years of an accredited four-year undergraduate program in engineering or a closely related field.
- Applicants are also assessed on publications, work experience, the school and program to which each previous degree pertains, evidence of exceptional communication skills, references, and the availability of financial resources, space, and suitable supervision.
- When proof of English language facility is required for admission, applicants may take one of a number of tests and present a minimum score.
  1. TOEFL (Test of English as a Foreign Language):
     - Paper-based TOEFL exam: 580 with 4 on the Test of Written English
     - Computer-based TOEFL exam: 237 with 4 on the essay rating component
     - Internet-based TOEFL exam: 93/120 with 22/30 on the writing and speaking sections.
  2. MELAB (Michigan English Language Assessment Battery): score of 85 or better.
  3. IELTS (International English Language Testing System): score of 7.0 or better.
  4. COPE (Certificate of Proficiency in English): total score of 4 or better (a least 1 in each component and 2 in the writing component).
- Please visit www.mie.utoronto.ca/grad for current English language facility requirements.

Program 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 2.5 full-course equivalents (FCE) and a thesis.
- MASc students are required to participate in the non-credit seminar course JDE 1000H during their first or second session of registration.
**Degree Programs**

### Master of Engineering

**Minimum Admission Requirements**
- Applicants must normally have a minimum average of B+, or equivalent, in each of the final two years of an accredited four-year undergraduate program in engineering or a closely related field.
- Applicants are also assessed on publications, work experience, the school and program to which each previous degree pertains, evidence of exceptional communication skills, references, and the availability of financial resources.
- When proof of English language facility is required for admission, applicants may take one of a number of tests and present a minimum score.
  1. TOEFL (Test of English as a Foreign Language):
     - Paper-based TOEFL exam: 580 with 4 on the Test of Written English
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     - Internet-based TOEFL exam: 93/120 with 22/30 on the writing and speaking sections.
  2. MELAB (Michigan English Language Assessment Battery): score of 85 or better.
  3. IELTS (International English Language Testing System): score of 7.0 or better.
  4. COPE (Certificate of Proficiency in English): total score of 4 or better (at least 1 in each component and 2 in the writing component).

**Please visit www.mie.utoronto.ca/grad for current English language facility requirements.**

### Program Requirements
- 5.0 full-course equivalents (FCE) or 3.5 FCE plus a supervised project. A plurality of the courses should be taught by the Department of Mechanical and Industrial Engineering.
- The program may be taken on a full-time or part-time basis; some courses are scheduled during evening hours to accommodate part-time students.

### Doctor of Philosophy

**Minimum Admission Requirements**
- 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 via one of three routes:
  1. **Master's degree.** Appropriate University of Toronto master's degree, or its equivalent from a recognized university, with a minimum B+ average.
  2. **Direct-entry.** Exceptionally strong applicants with a University of Toronto bachelor's degree with a minimum A- average may apply directly to the PhD program.
  3. **Transfer.** Very strong MASc students may apply to transfer to the PhD program after completing only one year of the MASc program.

- When proof of English language facility is required for admission, applicants may take one of a number of tests and present a minimum score.
  1. TOEFL (Test of English as a Foreign Language):
     - Paper-based TOEFL exam: 580 with 4 on the Test of Written English
     - Computer-based TOEFL exam: 237 with 4 on the essay rating component
     - Internet-based TOEFL exam: 93/120 with 22/30 on the writing and speaking sections.
  2. MELAB (Michigan English Language Assessment Battery): score of 85 or better.
  3. IELTS (International English Language Testing System): score of 7.0 or better.
  4. COPE (Certificate of Proficiency in English): total score of 4 or better (at least 1 in each component and 2 in the writing component).

**Please visit www.mie.utoronto.ca/grad for current English language facility requirements.**

### Program 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 course work:
  - Students with a master's degree normally are required to complete 2.5 full-course equivalents (FCE) and a thesis.
  - Direct-entry students admitted with a bachelor's degree are required to complete 4.0 FCE plus a thesis.
  - Transfer students must complete a total of 4.0 FCE plus a thesis.
- Students are required to participate in the non-credit seminar course JDE 1000H during their first or second session of registration.
- Each PhD student must pass a qualifying examination, a seminar presentation, additional annual progress meeting, the departmental PhD examination, and the SGS PhD final oral examination.
- PhD students are required to be on campus full-time unless special permission is obtained for off-campus study. Normally no more than four years are required to complete the program of study.

### Courses
- See the departmental graduate office for a schedule of available courses.

#### Robotics, Dynamic Systems and Controls
- MIE 1001H Dynamics II
- MIE 1002H Dynamics III
- MIE 1005H Theory of Vibrations I
- MIE 1009H Applied Acoustics
- MIE 1043H Control Systems II
- MIE 1062H Robot Kinematics and Dynamics
- MIE 1063H Introduction to Theoretical Kinematics
- MIE 1064H Control Analysis Methods with Applications to Robotics
Degree Programs

MIE 1066H  Robot Mechanics and Control
MIE 1067H  Automation System Design and Integration
MIE 1068H  Applied Nonlinear Control
MIE 1069H  Introduction to Microsystems
MIE 506H  MEMS Design and Microfabrication

MIE 1066H  Mechanical and Industrial Engineering

Thermal Sciences
MIE 1101H  Thermodynamics II
MIE 1102H  Fuel Cell Kinetics
MIE 1107H  Statistical Thermodynamics
MIE 1109H  Surface Phenomena
MIE 1110H  Nonequilibrium Thermodynamics
MIE 1111H  Conduction Heat Transfer
MIE 1112H  Advanced Topics in Conduction Heat Transfer
MIE 1113H  Radiant Heat Transfer
MIE 1115H  Heat Transfer with Phase Change
MIE 1116H  Design and Analysis of Heat Exchangers
MIE 1118H  Partially Ionized Gases
MIE 1122H  Combustion Engine Processes
MIE 1123H  Fundamentals of Combustion
MIE 1124H  Combustion in I. C. Engines
MIE 1125H  Advanced Topics in Combustion
MIE 1126H  Diffusion-Wave Fields: Mathematical Methods and Analytical Case Studies in the Thermal, Electronic and Biomedical Sciences
MIE 1127H  Engineering Applications of Sound, Electromagnetic, Thermal and Photonic Waves
MIE 1176H  Optoelectronic Energy Conversion II
MIE 1178H  Direct Energy Conversion and Corrosion
JEL 1704H  Introduction to Lasers
MIE 511H  Problems in Heat Transfer
MIE 513H  Combustion and Incineration
MIE 515H  Alternative Energy Systems
MIE 516H  Combustion and Fuels
MIE 517H  Fuel Cell System

Fluid Mechanics
MIE 1201H  Fluid Mechanics III
MIE 1202H  Fluid Mechanics IV
MIE 1203H  Hydrodynamics
MIE 1206H  Non-Newtonian Fluid Mechanics
MIE 1207H  Structure of Turbulent Flows
MIE 1209H  Advanced Topics in Turbulent Flows
MIE 1210H  Computational Fluid Mechanics and Heat Transfer
MIE 1211H  Advanced Topics in Convection
MIE 1212H  Convective Heat and Mass Transfer
MIE 1213H  Advanced Topics in Computational Fluid Dynamics
MIE 1220H  Environmental Fluid Dynamics
MIE 1221H  Advanced Topics in Hydraulics
MIE 1222H  Multiphase Flows
MIE 1231H  Introduction to Microfluidics
MIE 1232H  Microfluidics and Laboratory-on-a-Chip Systems
MIE 1248H  Hydraulics of Open Channels
MIE 512H  Air Pollution: Its Formation and Control

Applied Mechanics
MIE 1301H  Solid Mechanics
MIE 1302H  Elasticity
MIE 1303H  Fracture Mechanics
MIE 1304H  Fracture and Fatigue Engineering
MIE 1307H  Theory and Application of Elastic Plastic Fracture Mechanics
MIE 1340H  Plasticity and Metalforming
MIE 1341H  Plasticity I
MIE 1344H  Theory of Forming Processes
MIE 1346H  Viscoelasticity
MIE 1355H  Ultrasonic Non-Destructive Testing
MIE 1356H  Laser/Thermal Wave Techniques in NDE
MIE 1357H  Laser Biomedical Photacoustics, Biothermophotonics and Imaging
MIE 518H  Fundamentals of Aircraft Design
MIE 539H  Biomechanics II

Information Systems
MIE 1501H  Information Systems I: Data and Knowledge Modelling
MIE 1502H  Information Technology and Systems: Management Strategies
JCI 1503H  Advanced Topics in Computing and Information Systems
MIE 1504H  Management of Technological Change
MIE 1505H  Enterprise Modelling
MIE 1506H  Information Systems II: Models of Reasoning
MIE 1507H  Analysis of Fuzzy Systems
MIE 1508H  Design of Fuzzy Systems
MIE 1509H  Seminar on Approximate Reasoning and Knowledge-Based Systems
MIE 1510H  Formal Techniques in Ontology Engineering
MIE 1511H  Data Integration Topics in Biosciences
MIE 1512H  Research Topics in XML Retrieval

MIE 514H  Atmospheric Pollution: Environmental Effects and Consequences
MIE 519H  Environmental Fluid Mechanics
JMA 544H  Air Pollution and Control

Human Factors/Ergonomics
MIE 1402H  Experimental Methods in Human Factors Research
MIE 1403H  Analytical Methods in Human Factors Research
MIE 1404H  Human Factors in Information Technology
MIE 1405H  Human Control of Telerobotic Systems
MIE 1406H  Cognitive Work Analysis
MIE 1407H  Engineering Psychology and Human Performance
MIE 1408H  Theoretical Foundations of Human Factors
MIE 1409H  Design of Ecological Interfaces
MIE 1410Y  Human Factors Project
MIE 1411H  Design of Work Places
MIE 1412H  Human-Automation Interaction
Operations Research
MIE 1602H Methods in Linear Programming
MIE 1603H Integer Programming
MIE 1605H Stochastic Processes
MIE 1606H Queueing Theory
MIE 1607H Stochastic Modelling and Optimization
MIE 1608H Single Criterion Decision Making
MIE 1609H Multiple Criteria Decision Making
MIE 1610H The Design of Energy Systems
MIE 1611H Planning for Capacity Expansion
MIE 1612H Combinatorics and Graph Theory
MIE 1613H Discrete Event Simulation
MIE 1614H Introduction to Operational Research
MIE 1615H Stochastic Dynamic Programming
MIE 1616H Healthcare Management
MIE 1617H Financial Optimization
MIE 1618H Advanced Operations Research
MIE 1619H Constraint Programming and Local Search
MIE 1620H Mathematical Programming I
MIE 1621H Mathematical Programming II
MIE 561H Healthcare Systems
MIE 562H Scheduling
MIE 566H Decision Analysis

Design and Manufacturing Engineering
JCI 1321H Wood Engineering
JMZ 1704H Polymer Process Engineering
MIE 1706H Manufacturing of Cellular and Microcellular Polymers
MIE 1712H Manufacturing Processes, Machine Tools, Numerical Control
MIE 1713H Analysis and Design of Joints in Manufactured Products
MIE 1714H Optimal Design of Mechanical Systems
MIE 1715H Quality Control
MIE 1716H Design and Computer-Aided Engineering
MIE 1717H Design for Manufacture and Assembly
MIE 1718H Computer Integrated Manufacturing
MIE 1719H Engineering Design Modelling
MIE 1720H Creativity in Conceptual Design
MIE 1721H Reliability
MIE 1722H Supply Chain Management and Logistics
MIE 1723H Engineering Maintenance Management
MIE 1724H Topics in Estimation and Control of Discrete Product Manufacturing
MIE 1725H Group Technology
MIE 1726H Logistics
MIE 1727H Quality Assurance I
MIE 1728H Advanced Scheduling and Constraint Programming
MIE 1729H Machine Perception and Robot Sensors
MIE 1730H Plant Layout and Material Handling
MIE 1731H Quality Assurance II
MIE 1732H Tribology
MIE 540H Product Design

Mathematical Modelling and Analysis
MIE 1801H Engineering Analysis III
MIE 1802H Engineering Analysis with Complex Variables
MIE 1804H The Finite Element Method in Mechanical Engineering
MIE 1805H Analysis of Engineering Data
MIE 1806H Introduction to Digital Image Processing and Analysis
MIE 1807H Principles of Measurements
MIE 1808H Applied Dynamic System Modelling and Identification
MIE 1809H Advanced Mechatronics
MIE 1810H Neural Networks and Fuzzy Systems: Introduction, Modelling and Control
MIE 536H Engineering Analysis II

Special Topics
MIE 2002H Readings in Industrial Engineering I (Credit/No Credit)
MIE 2003H Readings in Industrial Engineering II (Credit/No Credit)
MIE 2004H Readings in Mechanical Engineering I (Credit/No Credit)
MIE 2005H Readings in Mechanical Engineering II (Credit/No Credit)

Engineering Management Courses
Contact the MIE Graduate Office regarding APS courses that may be used for credit towards a degree program.
APS 1001H Project Management
APS 1002H Financial Engineering
APS 1003H Professional Education
APS 1004H Human Resources Management
APS 1005H Operations Research for Engineering Management
APS 1088H Entrepreneurship and Business for Engineers
APS 1201H Topics in Engineering and Public Policy
APS 501H Leadership and Leading in Groups and Organizations

Seminar Courses
MIE 1650Y Research Seminars in OR (Credit/No Credit)
MIE 3002H Engineering Teaching and Learning (Credit/No Credit)

Graduate Faculty
Full Members
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Cristina Amon - BSc, MS, ScD
Nasser Ashgriz - BSc, MSc, PhD
Ravin Balakrishnan - BSc, MSc, PhD
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Mark Chignell - BSc, MSc, PhD
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Mariano Consens - BEng, MSc, PhD
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Lily Shu - BS, SM, PhD, Wallace G Chalmers Chair of Engineering Design
Craig Simmons - BSc, MSc, PhD, PEng, Canada Research Chair
Anthony Sinclair - BASc, MSc, PhD, PEng (Chair)
Jan Spelt - BASc, MASc, ME, PhD, PEng
David Steinman - BASc, MASc, PhD, PEng
Pierre Sullivan - BSM, MSME, PhD, PEng (Coordinator of Graduate Studies)
Yu Sun - BS, MS, PhD, PEng
Murray Thomson - BEng, MSc, PhD, PEng
Joaquim Jose Vicente - BASc, MS, PhD, PEng
James Wallace - BSM, BA, MSc, PhD, PEng
Lidan You - BS, MS, PhD
Jean Zu - BEng, MEng, PhD, PEng

Members Emeriti
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William Baines - BSc, MS, PhD, PEng
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Robert Fenton - DipEng, PhD
Patrick Foley - MA, FRSA, FHFAC
Frank Hooper - BASc, DIC, FEIC, PEng
David James - BSc, MA, MS, PhD, PEng
James Kellner - BASc, MASc, PhD
Harvey Kolody - BEng, MBA, DBA, PEng
A Wilhelm Neumann - BA, DrRenNat
Joseph Paradis - BASc, MASc, PhD, FCAE, PEng
Morton Posner - BASc, PhD, PEng

John Senders - BASc, DIC, FEIC, FCSME, FCAE, PEng
Ismail Turkens - BSc, MSc, PhD, PEng
John Van De Vege - BSc, MEng, PhD, PEng
Ronald Venter - BSc, MEng, PhD, PEng, FCSME
Charles Ward - BS, PhD, PEng

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Geoff Femia
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Frank Lin - BASc, MASc, MD, PhD
Guangjun Liu - BASc, MASc, PhD
Christian Moreau - BS, MS, PhD
Marcello Papini - BASc, MASc, PhD, PEng
Marius Paraschivoiu - BEng, MASc, PhD
Eric Pickett - BASc, MA, PhD
Remon Pop-Iliev - BEng, MASc, PhD, PEng
Milos Popovic - MSc, MASc, PhD
John Rogers - BSc, MS, PhD, PEng
Alison Smiley - BSc, MASc, PhD
Dong Sun - BASc, MASc, PhD
Thodoros Topaloglou - BSc, MSc, PhD
Gregory Zaric - BASc, MASc, MS, PhD

Members Emeriti
Abdo Abdelmessih - BME, MS, PhD, PEng
Donald Allen - BSc, BE, MASc, PhD, FCSME, FEIC, PEng
William Baines - BSc, MS, PhD, PEng
Iain Currie - BSc, MASc, PhD, FCSME, PEng
Robert Fenton - DipEng, PhD
Patrick Foley - MA, FRSA, FHFAC
Frank Hooper - BASc, DIC, FEIC, PEng
David James - BSc, MA, MS, PhD, PEng
James Kellner - BASc, MASc, PhD
Harvey Kolody - BEng, MBA, DBA, PEng
A Wilhelm Neumann - BA, DrRenNat
Joseph Paradis - BASc, MASc, PhD, FCAE, PEng
Morton Posner - BASc, PhD, PEng

John Senders - BASc, DIC, FEIC, FCSME, FCAE, PEng
Ismail Turkens - BSc, MSc, PhD, PEng
John Van De Vege - BSc, MEng, PhD, PEng
Ronald Venter - BSc, MEng, PhD, PEng, FCSME
Charles Ward - BS, PhD, PEng

Associate Members
Noureddine Atalati - PhD
Kamran Behdinan - BASc, MASc, PhD
James Bookbinder - BA, MBA, PhD
Tom Chau - BASc, MASc, PhD
Elizabeth Croft - BASc, MASc, PhD
Ibrahimp Dincer - BSc, MSc, PhD
Ebrahim Esmailzadeh - PhD, CEng
Deborah Fels - BSc, MHS, PhD
Geoff Femia
Daniel Frances - BASc, MASc, PhD, PEng
Michael Hair - BSc, PhD
Justin Hollands - BA, MA, PhD
Farhang Honarvar - BEng, MASc, PhD
John Kawall - BASc, MASc, PhD
Peter Knights - BEng, MEng, PhD
Frank Lin - BASc, MASc, MD, PhD
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David James - BSc, MA, MS, PhD, PEng
James Kellner - BASc, MASc, PhD
Harvey Kolody - BEng, MBA, DBA, PEng
A Wilhelm Neumann - BA, DrRenNat
Joseph Paradis - BASc, MASc, PhD, FCAE, PEng
Morton Posner - BASc, PhD, PEng
Medical Biophysics  MBP

Faculty Affiliation
Medicine

Degree Programs Offered
Medical Biophysics – MSc, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Biomolecular Structure, see p. 423
   - Medical Biophysics, PhD
2. Cardiovascular Sciences, see p. 426
   - Medical Biophysics, MSc, PhD
3. Developmental Biology, see p. 433
   - Medical Biophysics, PhD
4. Genome Biology and Bioinformatics, see p. 448
   - Medical Biophysics, PhD
5. Neuroscience, see p. 466
   - Medical Biophysics, MSc, PhD

Overview
The Department of Medical Biophysics, an interdisciplinary department with three streams – Cell and Molecular Biology, Molecular and Structural Biology, and Medical Physics – is located primarily at the Ontario Cancer Institute and the Sunnybrook Health Sciences Centre.

The department offers opportunities for research leading to the Master of Science and Doctor of Philosophy degrees – in a variety of biological problems; projects which cut across the conventional boundaries of physics, engineering, chemistry, biology, and medicine are encouraged. The department emphasizes basic and applied research related to cancer. Projects include the following areas: tumour biology, radiobiology, membrane function, molecular interactions, gene expression, cell differentiation and growth control, viral and chemical carcinogenesis, cellular and molecular immunology, hemopoiesis, macromolecular structure via x-ray crystallography and NMR spectroscopy, the physics of radiation therapy and diagnostic imaging, development of imaging systems involving ultrasound, nuclear magnetic resonance, and electron optics.

For detailed information, please visit the departmental Web site.

Contact and Address
Web: medbio.utoronto.ca
E-mail: medbio@uhnres.utoronto.ca
Telephone: (416) 946-2972, 946-2973
Fax: (416) 946-2050

Degree Programs

Master of Science

Minimum Admission Requirements
- SGS general regulations.
- Successful applicants with B.Sc. degrees are enrolled in the MSc program; qualified students can reclassify into the PhD degree program during their second year.
- Applicants with diverse backgrounds are encouraged to apply.
- Applicants holding bachelors degrees from non-Canadian universities are required to provide GRE scores (general and subject) with their application.

Program Requirements
- Students must successfully complete all degree course requirements. Course requirements depend on the subject chosen for study and on the student's background.
- Successful completion of an oral examination on the thesis topic.
- Program is normally completed in two years.

Doctor of Philosophy

Minimum Admission Requirements
- Applicants are admitted via one of two routes
  - Reclassification from the MSc program.
  - Completion of an MSc degree program in biological, physical, chemical, or medical sciences from a recognized Canadian University.
- Admission to the PhD program is highly selective and attainment of minimum admission requirements does not guarantee acceptance into the Ph.D. program.

Program Requirements
- Because of the broad range of topics available for thesis research and because of the different backgrounds of students admitted, each student, in consultation with his or her supervisor, will plan a program of study that provides the appropriate background for the area of investigation.
- All students must complete the required four full-course credits as outlined in the MBP Graduate Student Handbook.
- Students who transfer/reclassify into the doctoral program or who have completed a MSc degree in Medical Biophysics will receive credit for all
Degree Programs

courses taken during their MSc program in Medical Biophysics. Students who completed their MSc degree in a department other than Medical Biophysics may request one full-course credit for that degree. These students must still complete or be formally exempt from the required courses for the Medical Biophysics MSc degree. Exemption from a required course does not reduce the number of courses required; students must substitute another course equivalent in place of the exempted course.

- All Ph.D. students are expected to participate in MBP 1015Y Biophysics Seminar Course regardless of whether they previously received credit for it or not.
- Except by special arrangements, students are required to be on campus and participating full time until all program requirements are completed.

Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBP 1001Y</td>
<td>Advanced Cell Biology (Topics change; consult Course Coordinator about current topics)</td>
</tr>
<tr>
<td>MBP 1007H</td>
<td>Fundamentals in Molecular and Cell Biology I</td>
</tr>
<tr>
<td>MBP 1008H</td>
<td>Fundamentals in Molecular and Cell Biology II</td>
</tr>
<tr>
<td>MBP 1010H</td>
<td>Quantitative Biology—Statistical Methods</td>
</tr>
<tr>
<td>MBP 1011H</td>
<td>Foundations of Bioinformatics (Not currently offered; suggested alternative is JTB 2010H Proteomics and Functional Genomics)</td>
</tr>
<tr>
<td>MBP 1015Y</td>
<td>Biophysics Seminar</td>
</tr>
<tr>
<td>MBP 1018Y</td>
<td>Oncology</td>
</tr>
<tr>
<td>MBP 1022H</td>
<td>Advanced Cell Biology for Physical Scientists</td>
</tr>
<tr>
<td>MBP 1023H</td>
<td>Clinical Radiation Physics</td>
</tr>
<tr>
<td>MBP 1024Y</td>
<td>Advanced Medical Imaging</td>
</tr>
<tr>
<td>MBP 1026H</td>
<td>Clinical Imaging for Physical Scientists</td>
</tr>
<tr>
<td>MBP 1028H</td>
<td>Optical, Thermal and Radiation Biophysics</td>
</tr>
</tbody>
</table>

Graduate Faculty

Full Members

- Michael Archer - MA, MSc, PhD, DSc, Earle W McHenry Professor and Chair
- Cheryl Arrowsmith - BSc, PhD
- Liliana Attisano - BSc, PhD, Canada Research Chair
- Jane Aubin - BSc, PhD
- Dwayne Barber - BSc, PhD (Vice-Chair)
- Samuel Benchimol - BSc, PhD
- Yacov Ben-David - BSc, MSc, PhD
- Neil Berinstein - MD, FRCP(C)
- Alan Bernstein - BSc, PhD, FRSC
- Matthew Bjerknes - BSc, MSc, PhD
- Norman Boyd - MD, FRCP(C), The Lau Family Chair in Breast Cancer Research
- Robert Glen Bristow - BSc, MSc, MD, PhD, FRCP(C)
- Michael Bronskill - BSc, MSc, PhD
- Peter Burns - BSc, PhD (Chair)
- Avijit Chakrabartty - BSc, MSc, PhD
- Hazel Pi Cheng - BSc, MSc, PhD
- Peter Cheung - PhD, MSc, BSc
- Jayne Danska - AB, PhD
- Daniel Dumont - BSc, MSc, PhD
- Aled Edwards - BSc, PhD
- Jorge Filmus - MSc, PhD
- Stuart Foster - BASc, MSc, PhD
- Paul Fraser - BSc, PhD
- Brenda Gallie - MD
- Jean Gariepy - BSc, PhD
- Simon Graham - BSc, PhD
- Abhijit Guha - BSc, MSc, MD, FACS, FRCS(C), The Alan and Susan Hudson Chair
- Razqallah Hakem - PhD
- Lea Anne Harrington - BSc, MSc, PhD
- David Hedley - MBCHB, MD
- Mark Henkelman - BSc, MSc, PhD, Canada Research Chair
- Richard Hill - BA, PhD
- David Hogg - BSc, MD, FRCP(C)
- Thomas J Hudson - MD
- Kullervo Hyynynen - BS, MSc, PhD
- Mitsuhiko Ikura - BSc, PhD
- Norman Iscove - MD, PhD
- David Jaffray - PhD, BSc
- Michael Julius - BSc, PhD
- Igor Jurisica - Diplng, MSc, PhD
- Suzanne Kaml-Reid - BA, MA, PhD
- Gordon Keller - PhD
- Robert Kerbel - BSc, PhD, John & Elizabeth Tory Professor of Experimental Oncology
- Rama Khokha - BSc, MSc, PhD
- Michael Kolios - PhD, MSc, BSc
- Michelle Letarte - BSc, PhD
- Lothar Lilge - MA, PhD
- Fei-Fei Liu - MD, FRCP(C)
- Geoffrey Liu - MD, MSc
- Tak Mak - BSc, MSc, PhD, DSc, FRS, FRSC, University Professor, Canada Research Chair
- David Malkin - MD, FRCP(C)
- Armen Manoukian - BSc, PhD
- Philip Marsden - MD, Keenan Chair in Medical Research
- Anne Martel - MSc PhD
- Jane Mclgadie-Dolson - BSc, PhD (Coordinator of Graduate Studies)
- Jeffrey Medin - BSc, PhD
- Hans Messner - MD, PhD, FRCP(C)
- Mark Minden - MD, BSc, PhD, ABIM, FRCP, Leukemia Research Chair
- Salomon Minkin - BSc, MSc, PhD
- Alan Moody - BA, MA, MB BS, FRCP(UK)
- Benjamin Neel - AB, PhD, MD
- Pam Ohashi - BSc, PhD
- Emil Pai - DrRerNat, Canada Research Chair
- Christopher Paige - BSc, PhD, The Ronald N Buick Chair in Cancer Research
- Linda Penn - BSc, PhD
- Josef Penninger - MD, PhD, Canada Research Chair
- Jean-Phillipe Pignol - MD, MSc, PhD

*Courses which may continue over a program. The course is graded when completed.*
Degree Programs

Donald Plewes - BSc, MSc, PhD
Gil Prive - BSc, PhD
J Alan Rawlinson - BSc, MSc, FCCPM
David Rose - BA, PhD
Robert Rottapel - BA, MA, MD
John Rowlands - BSc, PhD, FCCPM
Aaron Schimmer - MD, PhD, FRCP(C)
Andre Schuh - BSc, MD, FRCP(C)
Michael Sherar - BA, PhD
Jeremy Squire - BSc, MSc, PhD, JC Boileau Grant Chair in Oncologic Pathology
Vuk Stambolic - PhD, MSc, BSc
Greg Stanisz - MS, PhD
Stephen Strother - Bsc, MSc, PhD
Ian Tannock - BA, MD, PhD, FRCP, The Daniel E. Bersagel Chair in Medical Oncology
Elizabeth Tillier - PhD, MSc, BSc
David Trichler - BA, MS, ScD
Ming-Sound Tsao - BSc, MD, FRCP(C)
Derek Van Der Kooy - BSc, MSc, PhD
Alex Vitkin - BASc, MSc, PhD
William Whelan - PhD, MSc, BSc
Brian Wilson - BSc, PhD
Chong Shun Wong - MD, FRCP(C)
Michael Wood - BSc, PhD
James Woodgett - BSc, PhD, The AMGEN Chair in Cancer Research
Graham Wright - BASc, MSc, PhD
Martin Yaffe - BSc, MSc, PhD
Wen-Chen Yeh - MB, PhD
Eldad Zacksenhaus - BSc, PhD
Gang Zheng - MSc, PhD

Members Emeriti

Arthur Axelrad - BSc, MD, PhD, University Professor Emeritus
Robert Bruce - BSc, MD, MSc, PhD, FRCP(C), FRSC
Alastair Cunningham - BVSc, PhD
John Hunt, Prof. Emeritus - BSc, MSc, PhD
Ernest McCulloch - OC, MD, FRCP(C), FRSC, FRS, University Professor Emeritus
Richard Miller - BSc, MSc, PhD, FRSC
Peter Ottensmeyer - BASc, MA, PhD
Robert Phillips - BA, PhD
A Michael Rauth - BSc, PhD, Professor Emeritus
James Till - BA, MA, PhD, FRSC, University Professor Emeritus
Gordon Whitmore - BA, MA, PhD, FRSC

Associate Members

Susan Adamson - BSc, MSc, PhD
Curtis Caldwell - BA, MA, PhD
Josette Chen - BSc, MA, PhD
Rajiv Chopra - PhD
Charles Cunningham - MSc, PhD
Gregory Czarnota - MD, PhD
Susan Done - BA, MA, PhD, MBA, FRCP(C)
David Goertz - MSc, PhD
Noor Kabani - Bsc, MSc, PhD
Thomas Kislinger

Christine Koch - BSc, MD, PhD, FRCP(C)
Christopher Macgowan - MSc, PhD
Howard Michaels - BASc, MSc, PhD
Hitoshi Okada - MD, PhD
Geordi Pang - PhD
Andrei Pugachev - MSc, PhD
Mira Puri - PhD, BSc
Jonathan Rast - BS, MS, PhD
Brian Raught - PhD, MS, BS
Michael Reedijk
Bernard Ross - PhD
Jeffrey Siewerdsen - PhD, MSc, BA
John Sled - BSc, MSc, PhD
David Spaner - MD, FRCP(C), PhD
Suzanne Trudel - MD, MSc
Homayoun Vaziri - PhD, BSc
Richard Wells - MD, PhD
Minna Nancy Woo
Degree Programs

Medical Science  MSC

Faculty Affiliation
Medicine

Degree Programs Offered

Bioethics - MHSc
Biomedical Communications - MScBMC
Medical Science - MSc, PhD

Collaborative Programs Offered

Degree programs that participate in:
1. Aboriginal Health, see p. 404
   • Health Science in Bioethics, MHSc
   • Medical Science, MSc, PhD
2. Addiction Studies, see p. 406
   • Health Science in Bioethics, MHSc
   • Medical Science, MSc, PhD
3. Aging, Palliative and Supportive Care Across the Life Course, see p. 408
   • Health Science in Bioethics, MHSc
   • Medical Science, MSc, PhD
4. Bioethics, see p. 416
   • Health Science in Bioethics, MHSc
   • Medical Science, MSc, PhD
5. Biomedical Engineering, see p. 418
   • Medical Science, MSc, PhD
6. Cardiovascular Sciences, see p. 426
   • Health Science in Bioethics, MHSc
   • Medical Science, MSc, PhD
7. Environment and Health, see p. 439
   • Health Science in Bioethics, MHSc
   • Medical Science, MSc, PhD
8. Genome Biology and Bioinformatics, see p. 446
   • Medical Science, PhD
9. Health Care, Technology and Place, see p. 454
   • Medical Science, PhD
10. Health Services and Policy Research, see p. 456
    • Health Science in Bioethics, MHSc
    • Medical Science, MSc, PhD
11. Knowledge Media Design, see p. 462
    • Medical Science, MSc, PhD
12. Neuroscience, see p. 466
    • Medical Science, MSc, PhD
13. Toxicology, Biomedical, see p. 421
    • Medical Science, MSc, PhD
14. Women's Health, see p. 478
    • Health Science in Bioethics, MHSc
    • Medical Science, MSc, PhD

Overview

The Master of Health Science in Bioethics is designed for practitioners wishing to augment their knowledge and skills in bioethics. It provides the theoretical, methodological, and applied skills requisite for health care professionals to face the bioethical challenges posed by modern health care. The program is a course-only, professional master’s degree program. Students interested in a research-stream program should consider the Collaborative Program in Bioethics (CPB).

The Master of Science in Biomedical Communications is a two-year professional master's program involving the artist/visual communicator in medical and health education and research. The program offers two fields: Biomedical Media Design and Biomedical 3-D Visualization Design.

Master of Science and Doctor of Philosophy programs are 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 four streams:
1. biomedical science
2. clinical science
3. health systems/services
4. population health

The full-time MSc and PhD programs emphasize hands-on research, rather than course work. Graduates may seek positions as academics and health care professionals in universities, government, and industry.

Contact and Address

Bioethics Program
Web: www.utoronto.ca/jcb/education/grad_MHSc.htm
E-mail: carmen.alfred@utoronto.ca
Telephone: (416) 978-0871
Fax: (416) 978-1911

Joint Centre for Bioethics (JCB)
88 College Street
University of Toronto
Toronto, Ontario  M5G 1L4
Canada

Biomedical Communications Program
Web: www.bmc.med.utoronto.ca/BMC/
E-mail: bmc.info@utoronto.ca
Telephone: (416) 978-2659
Fax: (416) 978-6891

276  Medical Science
Degree Programs

Medical Science Program:
Web: www.library.utoronto.ca/ms/
E-mail: dir.medscience@utoronto.ca
Telephone: (416) 978-5012
Fax: (416) 971-2253

Institute of Medical Science
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1 King’s College Circle
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Medical Science Program:
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Canada

Degree Programs

Bioethics

Master of Health Science in Bioethics

Minimum Admission Requirements
• normally four years of undergraduate study and a recognized degree in one of the health care sciences (e.g., MD, BScN, BScOT, BScPT, BSW) or equivalent. Applicants from other disciplines considered on an individual basis.
• demonstrated evidence of scholarly ability and personal maturity
• potential that the applicant will provide significant bioethics leadership in his or her home institution or local community upon completion of the MHSc in Bioethics.

Program Requirements
• program is offered in modular format in 20 two-day Thursday/Friday blocks from September to April, normally over two years; certain international students may complete all course work in one academic year
• a major paper of publishable quality on a topic of the student's choice
• a practicum
• courses as outlined below

Courses

First year
HAD 5771H Resource Allocation Ethics
MSC 3001Y Foundations Seminar I
MSC 3003Y Empirical Approaches in Bioethics
MSC 3005H Legal Approaches to Bioethics
PHL 2146Y Topics in Bioethics

Second year
MSC 1051H Research Ethics
MSC 1052H Clinical Bioethics
MSC 3002Y Foundations Seminar II
MSC 3004Y Ethics Committees and Consultations
For international students, MSC 3004Y is not required. Instead, MSC 3010Y International Research Ethics is required and is taken in May.
MSC 3006Y Bioethics Independent Study
MSC 3008Y Practicum

Biomedical Communications

Master of Science in Biomedical Communications

Minimum Admission Requirements
• graduation from a recognized university with a minimum four-year undergraduate degree which includes a variety of courses in the arts, sciences, and humanities
• minimum mid-B standing (73-76% or 3.0 based on a 4-point scale) in final two years of undergraduate study
• high-quality portfolio of visual material; consult the MScBMC Web site for list of prerequisite courses required for admission

Program Requirements
• 8.5 full-course equivalents (FCE); students have the option to select either 1.0 elective FCE and a master's research project and paper or 2.0 elective FCE and a master's research project

Courses
Consult Faculty each session regarding course offerings.

Required Courses
LMP 1012H Seminars on Pathology
MSC 1001Y Human Anatomy (Including Embryology)
MSC 2001Y Visual Representation of Medical Knowledge
MSC 2002Y Sequential Medical Communication
MSC 2003Y Biomedical Communications Technologies
MSC 2004H Research Methods
MSC 2005H Evolution of Medical Illustration
MSC 2009H Ethics and Professionalism in Biomedical Communications
MSC 2012H Neuroanatomy for Visual Communication
MSC 2013Y Master's Research Project and Paper

Elective Courses
Students are encouraged to take at least one of their electives in a graduate program other than Biomedical Communications.

MSC 2015H Interpretive Visualization: Cinematic Design and Preproduction
Degree Programs

MSC 2016H Visualization Methods
MSC 2017H Visualization Technology
MSC 2006H Advanced Media Design Technologies
MSC 2007H Visual Synthesis of Medical/Scientific Process
MSC 2008H Community-Centred Design Research
MSC 2011H Special Topics in Biomedical Communications

Medical Science

Master of Science

Minimum Admission Requirements
- four-year BSc or an MD degree from a recognized university and academic credentials and background preparation appropriate to the field of study. 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.
- average in 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 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 93/120 on the internet-based test and 22/30 on the writing and speaking sections.
  - Michigan English Language Assessment Battery (MELAB): minimum score of 87.
  - International English Language Testing System (IELTS): minimum score of 7.5.
  - Certificate of Proficiency in English (COPE): minimum score of 5.

Program Requirements
- coursework and research; program normally requires two years
- 1.0 graduate full-course equivalent (FCE) in addition to MSC 1010Y MSc Student Seminars
- a research thesis and oral thesis examination
- students are expected to be on campus and participating full time until all program requirements are completed

Doctor of Philosophy

Minimum Admission Requirements
- applicants whose primary language is not English, and who graduated from a university where the language of instruction 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 93/120 on the internet-based test and 22/30 on the writing and speaking sections.
  - Michigan English Language Assessment Battery (MELAB): minimum score of 87.
  - International English Language Testing System (IELTS): minimum score of 7.5.
  - Certificate of Proficiency in English (COPE): minimum score of 5.
- students are accepted via one of three routes:
  - after completing MSc degree (with a MSc thesis) with at least A- standing from a recognized university.
  - transfer from the IMS MSc program. Outstanding students may be considered for reclassification into the PhD program without writing a MSc thesis.
  - direct entry into the PhD Program from a four-year BSc or an MD degree, without completing a MSc degree.

Program Requirements
- coursework - students may be required to take extra courses in addition to the degree requirements listed below:
  - Students with MSc degree (with a MSc thesis) complete a minimum of 1.0 graduate full-course equivalent (FCE), plus MSC 1011Y PhD Student Seminars.
  - Transfer students from the IMS MSc must complete 1.0 graduate FCE with a minimum A- average, plus MSC 1010Y MSc Student Seminars. If recommended by the Program Advisory Committee, the student will be evaluated in an oral transfer examination within 18-24 months of initial graduate registration. Successful applicant will enter the PhD program and complete a minimum of 2.0 graduate FCE (including those already completed in the MSc), plus MSC 1011Y PhD Student Seminars. Alternatively, the Exam Committee may decide that the student must complete the MSc degree before being considered for admission to the PhD program.

*Courses which may continue over a program. The course is graded when completed.
Degree Programs

Medical Science

- Direct entry students must pass a qualifying examination within 18-24 months of entry and must complete a minimum of 2.0 graduate FCE plus MSC 1011Y: PhD Student Seminars.
- A research thesis and oral thesis examination
- Courses should be completed in the first year; research, written thesis, and oral defense will be completed by the end of year 3 or 4
- Students are expected to be on campus and participating full time until all program requirements are completed

Courses
Not all courses are offered each year. Check departmental Web site for course availability.

JCV 3060H Advanced Topics in Cardiovascular Sciences—Molecular Biology and Heart Signal Transduction
JCV 3061H Advanced Topics in Cardiovascular Sciences—Hormones
JCV 3062H Advanced Research in Cardiovascular Sciences—Heart Function
JCV 3063H Advanced Research in Cardiovascular Sciences—Vascular
JFK 1120H Selected Topics in Drug Development I
JFK 1121H Selected Topics in Drug Development II
JHM 1000H Issue Analysis in Interdisciplinary International Health Research
JPM 1005Y Behavioural Pharmacology
JPM 1008H Psychopharmacology and Women’s Health
MSC 1001Y Human Anatomy (Including Embryology)
MSC 1006H Advanced Neuroanatomy
MSC 1008Y Advanced Human Embryology and Teratology
MSC 1010Y MSC Student Seminars (Credit/No Credit)
MSC 1011Y PhD Student Seminars (Credit/No Credit)
MSC 1040H Physiologic Basis of Disease
MSC 1051H Research Bioethics
MSC 1052H Clinical Bioethics
MSC 1060H Biostatistics for Health Scientists
MSC 1080H Introduction to Biostatistics and Clinical Epidemiology
MSC 1081H Studies in Schizophrenia
MSC 1082H Seminars in Psychosomatic Research
MSC 1084H Glomerular Based Diseases—Bedside
MSC 1085H Molecular Approaches to Mental Health and Addictions
MSC 1090H Introduction to Clinical Biostatistics
MSC 1500H Advanced Radiotherapy and Medical Physics
MSC 1501H Frontiers in Radiation Medicine Research
MSC 1502H Translational Radiobiology Applied to Radiation Science
MSC 2010Y Molecular Medicine in Human Genetic Disease
MSC 2020H Diagnostic and Therapeutic Strategies in Genomic Medicine
MSC 4100H Cell Mechanics: Structure, Function, and Disorder
MSC 5100H Evolutionary Medicine: The Sociobiology of Sickness and Healing
MSC 6000H Special Topics in Anatomy
MSC 7000Y Regenerative Medicine
MSC 8000Y Transdisciplinary Studies in Infectious Disease (using Hepatitis C as a Model)

Graduate Faculty

Full Members
Sharon Abel - BSc, MA, PhD
Jean Addington
Anne Agur - BSc, MSc, PhD
Claude Alain - BA, MA, PhD
Johane Allard - MD, FRCP(C)
Benjamin Alman - MD, FRCS(C), Canada Research Chair
Liliana Attisano - BSc, PhD, Canada Research Chair
Jane Aubin - BSc, PhD
George Awad
Peter Backx - BSc, MSc, PhD, DVM
Elizabeth Badley - BSc, MSc, DPhil, PhD
Michael Bagby
Darlis Bagli
Andrew Baker - MD, FRCP(C)
Michael Baker - MD
Brenda Banwell
Bharati Bapat - BSc, MSc, PhD
Howard Barbarea - PhD
Cathy Barr - PhD
Maria Barrera - MA, PhD
Sylvain Baruchel
Anne Bassett - MD
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Joseph Beitzman - MD
Jaques Belik - MD
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Bhagw Bhavnani - PhD
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Sandra Black - BSc, MD
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T. Douglas Bradley - BA, MD, NRC, FRCP(C)
Donald Branch - PhD
Roderick Angus Bremner - PhD
Julie Brill - BA, PhD
Robert Glen Bristow - BSc, MSc, MD, PhD, FRCP(C)
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Dianne Broussard - BA, PhD
Theodore Brown - BSc, PhD
Degree Programs

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James Brunton - BSc, MD, FRCP(C)
Lori Burrows - BSc, PhD
Yvonne Margaretts Buys - MD, FRCS(C)
Christopher Calderone
Peter Carlen - MD, FRCP(C)
Robert Casper - MD, FRCS
David Cassidy - BSc, DC, MSc, PhD, Dr Med Sc
Pamela Catton
Mark Catral - MD, MSc, FRCS(C)
Daniel Catran - MD, FRCP(C)
John Challis - BSc, PhD, DSc, FIBiol, FRCOG, FRSC
Helen Chan - MD
Kenneth Chapman - MSc, MD
Robert Chen - MA, MB, BChir, MSc, FRCP(C)
Angela Cheung - BA, MD, PhD, FRCP(C)
Douglas Cheyne
Bruce Christensen
David Clarke - PhD
Zane Cohen - BA, MD, FRCS(C)
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Paul Corey - BSc, MA, PhD
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(Coordinator of Graduate Studies)
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Gerald Devins - PhD
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Degree Programs

Medical Science 281
Degree Programs

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Timothy Roberts
John Roder - BA, PhD, Canada Research Chair
Gary Rodin - BSc, MD, FRCP
Myroslava Romach
David Rootman - BA, MD, FRCS
Norman Rosenblum - BSc, MD, FRCPS(C), Canada Research Chair
Heather Ross
Daniela Rotin - BSc, MSc, PhD
Ori Rotstein - MSc, MD, FRCS(C) (Director)
Robert Rottapel - BA, MA, MD
Sean Rourke - PhD
Joanne Rovet - BSc, PhD
Barry Rubin - MDCM, PhD, FRCS(C)
Laurence Rubin - MD, FRCPC
Joel Sadavoy - MD, FRCP(C)
Jean Saint-Cyr - BA, MA, PhD
Irving Salit - BSc, MDCH, FRCP
Michael Salter - MD, PhD, Canada Research Chair
Paul Sandor
Russell James Schachar - MD, FRCP(C)
Emil Scheretsch
Stephen Scherer - BSc, MSc, PhD
James Scholey - MD
Andre Schuh - BSc, MD, FRCP(C)
John Semple - BSc, MSc, MD, FRCS(C)
John Wesley Semple - PhD
Colin Shapiro - BSc, PhD
James Sharpe - MD
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Andrew Paterson - BS, MBChB
Felix Ratjen
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Degree Programs

Lisa Robinson
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Albert Yee
Medieval Studies  MST

Faculty Affiliation
Arts and Science

Degree Programs Offered
Medieval Studies – MA, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Ancient and Medieval Philosophy, see p. 411
   • Medieval Studies, PhD
2. Book History and Print Culture, see p. 424
   • Medieval Studies, MA, PhD
3. Editing Medieval Texts, see p. 437
   • Medieval Studies, PhD
4. Sexual Diversity Studies, see p. 469
   • Medieval Studies, MA, PhD
5. Women and Gender Studies, see p. 473
   • Medieval Studies, MA, PhD

Overview
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: www.chass.utoronto.ca/medieval/
E-mail: medieval.studies@utoronto.ca
Telephone: (416) 978-4884

Centre for Medieval Studies
125 Queen’s Park, Third floor
University of Toronto
Toronto, Ontario M5S 2C7
Canada

Degree Programs

Master of Arts

Minimum Admission Requirements
• Four-year BA, or its equivalent, with at least B+ standing in previous courses. Course work in the medieval period must have formed part of the program.
• Applicants for the MA degree, full-time and part-time, must:
  o Follow application instructions on the department’s Web site
  o Complete forms in which they state the reasons for undertaking graduate studies in the medieval area and their qualifications for applying to do so.
• Applicants for the MA degree, full-time and part-time, must either achieve a pass of the Level One Medieval Latin examination upon arrival or else attain credit in MST 1000Y in the first year of enrolment in the MA program.

Program Requirements
• MA students may be full-time or part-time.
• Students may obtain an MA in medieval studies by course work or by a combination of course work and thesis.
  o In the course work option, the student must successfully complete 4.0 full-course equivalents (FCE), unless he or she passes the Level One Latin examination upon arrival, in which case 3.0 FCE are required. MA students who pass the Level One Latin examination on arrival are required to take only 3.0 FCE for the MA; however, those interested in eventually proceeding to the PhD are strongly urged to audit MST 1001Y. (Enrolment for credit for MST 1001Y is open only to students enrolled in a doctoral program.) MA students who do not pass the Level One Latin examination on arrival MUST register for MST 1000Y.
  o In the thesis option, in addition to the thesis, 3.0 FCE are required or else 2.0 FCE plus a Level One Latin examination pass upon arrival in the program. An MA thesis must be on a subject approved by the Centre.
• Course training in Latin is given at three levels. All students are expected to arrive with knowledge equivalent to a first-year university course in Latin language. MST 1000Y Introductory Medieval Latin 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 who have achieved the Level Two Latin examination pass on arrival.
Degree Programs

Doctor of Philosophy

Minimum Admission Requirements
- Applicants must satisfy the Centre of their ability to do independent research of high quality. Students may be admitted via one of two routes:
  - a four-year University of Toronto bachelor’s degree, or its equivalent from a recognized university, with an average grade of at least A- in the applicant’s overall program.
  - a University of Toronto master's degree in medieval studies or a related field, or its equivalent from a recognized university, with an average grade of at least A- in the applicant’s overall program.
- All applicants must:
  - follow application instructions on the department’s Web site.
  - complete 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 may register in the PhD program.

Program Requirements
- The PhD is offered only on a full-time basis. During the first two years, students must take a minimum of 3.0 FCE, including 1.0 FCE in one minor subject. In view of the Centre's interdepartmental nature, courses in medieval philosophy, history, music, English, and so on, that are related to the general area of the major field may be counted as minors, as long as they do not directly constitute part of the major field proposal. MST 1001Y may not be counted as a minor subject or included in the 3.0 FCE minimum for the degree, but it must be taken in addition to the 3.0 FCE minimum by all those who do not pass the Level Two Latin examination upon arrival in the program.
- Course training in Latin is given at two levels. MST 1001Y Intermediate Medieval Latin 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 MST 1001Y 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 MST 1001Y but require further training in order to achieve the Level Two Latin examination pass.
- Level Two Latin examination and the Centre’s examinations in the French and German languages.
- Major field proposal and major field examination.
- The outline of the student’s proposed doctoral dissertation should be worked out by the student in close consultation with the supervisor and the advisory committee. The complete PhD dissertation prospectus should be prepared according to the Centre’s guidelines. The candidate will be required to defend the dissertation at the final oral examination.
- It is possible to complete a PhD in Medieval Studies in four years, but some students, depending on their background preparation, find that it takes longer than four 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 four years.

Courses
Not all courses are offered every year. Please consult the Centre’s Web site which lists the courses the Centre for Medieval Studies will offer 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.

Courses marked (PR) have prerequisites; further information may be obtained from the Centre’s Web site.

Foundations and Theory of Medieval Studies
HIS 1201H, MST 3101H, MST 3103H, MST 3201H, MST 3301H, MST 3401H, MST 3501H. Please refer to the detailed listing below for complete titles.

Art
FAH 1120H Problems in Patronage
FAH 1121H Twelfth-Century Renaissance?
FAH 1122H Crusaders in the East: Art and Life
FAH 1123H The Art of the Medieval Book
FAH 1124H Byzantine Church Decoration
FAH 1125H Problems in Medieval Pilgrimage
FAH 1126H Exceptional Cities of the Middle Ages
FAH 1127H Early Medieval Art
FAH 1128H Byzantine Art and the West
FAH 1130Y The Classical Tradition in Western Medieval Art
FAH 1131H Profane Medieval Art
FAH 1134H Communal Painting and Propaganda in Italy During the Thirteenth and Fourteenth Centuries
FAH 1135H Naples in the Later Middle Ages
FAH 1141H Words and Images in Medieval Art
FAH 1171H Beginning of Modernism: From Images to Pictures
FAH 1172H Medieval Visualizations of "Reality": Life, War, and Death
FAH 1200H Crusader Art
FAH 1228H Representation, Information and Interpretation of Medieval Pictures

Book History and Print Culture
BKS 1000Y Book History and Print Culture
BKS 2000H Advanced Seminar in Book History and Print Culture
BKS 2001H Practicum in Book History and Print Culture

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<tr>
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<td>CLA 5017H Latin Legal Texts and the History of Late Roman Institutions</td>
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<tr>
<td>Comparative Literature</td>
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<tr>
<td>COL 5021H The Body in Medieval Literature</td>
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<tr>
<td>COL 5032H Feminist Approaches to Medieval Literature</td>
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<td>COL 5064H Medieval Literary Theory</td>
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<td>East Asian Studies</td>
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<td>EAS 1143Y Civilization in Medieval China</td>
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<tr>
<td>English</td>
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<tr>
<td>ENG 1001H Old English I</td>
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<td>ENG 1002H Old English II</td>
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<tr>
<td>ENG 1027H Constructions of the Other in Medieval Literature</td>
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<tr>
<td>ENG 1093H The Medieval Vernacular Book</td>
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<tr>
<td>ENG 1551H Chaucer: Canterbury Tales</td>
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<tr>
<td>ENG 1593H Langland: Piers Plowman</td>
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<tr>
<td>French Language and Literature</td>
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<tr>
<td>FRE 1164H Medieval French Language and Literature</td>
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<tr>
<td>FRE 1310H Le Roman de la rose et l’allégorie médiévale</td>
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<tr>
<td>Germanic Languages and Literatures</td>
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<tr>
<td>GER 1200H Middle High German</td>
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<tr>
<td>History</td>
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<tr>
<td>HIS 1201H The Materials of Medieval History (Credit/No Credit)</td>
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<tr>
<td>HIS 1207H Pastoralia: The Medieval History of Pastoral Care</td>
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<tr>
<td>HIS 1208H Writings of Robert Grosseteste</td>
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<tr>
<td>HIS 1209H The Anglo-Saxons</td>
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<tr>
<td>HIS 1210H Gregory of Tours and the Sixth Century</td>
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<tr>
<td>HIS 1213H Medieval Institutes of Perfection (joint graduate/undergraduate)</td>
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<tr>
<td>HIS 1214H The Merovingians</td>
</tr>
<tr>
<td>HIS 1215H Social Change in Medieval England, 1154-1279</td>
</tr>
<tr>
<td>HIS 1218H The Mediaeval Church (joint graduate/undergraduate)</td>
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<tr>
<td>HIS 1220H Mediaeval Canon Law (joint graduate/undergraduate)</td>
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<tr>
<td>HIS 1221H Topics in Early Modern European Social History</td>
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<tr>
<td>HIS 1222H Ritual in Renaissance and Early Modern Europe</td>
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<tr>
<td>HIS 1223H Humanism and the Renaissance</td>
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<tr>
<td>HIS 1230H The Sexes in the Western World, 1450-1650</td>
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<tr>
<td>HIS 1283H Crusades, Conversion and Colonialization in the Medieval Baltic (joint graduate/undergraduate)</td>
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<tr>
<td>HIS 1293Y Kievian Rus'</td>
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<tr>
<td>History and Philosophy of Science and Technology</td>
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<tr>
<td>HPS 1215H Medieval Technology and Society</td>
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<tr>
<td>HPS 1217H Technology and War: 1090-1918</td>
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<tr>
<td>HPS 5007H Fundamentals of the History of Technology I</td>
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<tr>
<td>Italian Studies</td>
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<tr>
<td>ITA 1025H Old Italian</td>
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<tr>
<td>ITA 1165H Introduction to Italian Philology</td>
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<tr>
<td>ITA 1170H Textual Criticism and the Editing of Early Italian Texts</td>
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<tr>
<td>ITA 1200H Dante</td>
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<tr>
<td>ITA 1203H Boccaccio</td>
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<tr>
<td>ITA 1330H Petrarch and Petrarchism</td>
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<tr>
<td>ITA 1540H Renaissance Italian Theatre</td>
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<tr>
<td>ITA 1545H The Sacra Rappresentazione</td>
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<tr>
<td>ITA 1597H The Commedia dell’Arte</td>
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<tr>
<td>Joint Courses</td>
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<tr>
<td>JMT 1001H Topics in the Ancient Philosophical Commentators (PR)</td>
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<tr>
<td>JRL 1100Y Introduction to Romance Philology</td>
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<tr>
<td>Medieval Studies</td>
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<tr>
<td>MST 1000Y Introductory Medieval Latin</td>
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<tr>
<td>MST 1001Y Intermediate Medieval Latin</td>
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<tr>
<td>MST 1002Y Advanced Medieval Latin (Credit/No Credit)</td>
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<tr>
<td>MST 1012H Carolingian Poetry (PR)</td>
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<tr>
<td>MST 1013H Pre-Conquest Anglo-Latin Literature (PR)</td>
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<tr>
<td>MST 1016H Hagiography of the Norman Transition (PR)</td>
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<tr>
<td>MST 1020H The Medieval Latin Epic (PR)</td>
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<tr>
<td>MST 1022H Virgil in the Middle Ages (PR)</td>
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<tr>
<td>MST 1035H Humanistic Latin (PR)</td>
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<tr>
<td>MST 1101H Codicology</td>
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<tr>
<td>MST 1104H Latin Palaeography I (PR)</td>
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<tr>
<td>MST 1105H Latin Palaeography II (PR)</td>
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<tr>
<td>MST 1107H Latin Textual Criticism (PR)</td>
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<tr>
<td>MST 1110H Diplomatics and Diplomatic Editing (PR)</td>
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<tr>
<td>MST 1111H Sources and Materials for Editing Medieval Texts (PR)</td>
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<tr>
<td>MST 1113H Vernacular Text-Editing: A Collaborative Project</td>
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<td>MST 1115H English Palaeography (PR)</td>
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<td>MST 1120H Literacy in Early Medieval Europe</td>
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<tr>
<td>MST 1210H Judeo-Christian Koine Greek (PR)</td>
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<tr>
<td>MST 1212H The Apocryphal Bible (PR)</td>
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<tr>
<td>MST 1371H Old English Philology: Grammar (PR)</td>
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<tr>
<td>MST 1379H The Blickling Homilies (PR)</td>
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<tr>
<td>MST 1381H Homilies of the Vercelli Book (PR)</td>
</tr>
<tr>
<td>MST 1384H The Exeter Book of Old English Verse (PR)</td>
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<tr>
<td>MST 1385H Theory and Practice in the Editing of Old English Texts (PR)</td>
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<tr>
<td>MST 1386H Materials for Anglo-Saxon Studies</td>
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<tr>
<td>MST 1392H Editing and Appreciating Wulfstan’s Prose (PR)</td>
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<tr>
<td>MST 1398H Alfredian Prose (PR)</td>
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<tr>
<td>MST 2005H German Heroic Epic (PR)</td>
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<td>MST 2006H Wolfram von Eschenbach: Parzival (PR)</td>
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<tr>
<td>MST 2010Y Old Norse</td>
</tr>
<tr>
<td>MST 2015H,Y Studies in Old Norse Texts (PR)</td>
</tr>
</tbody>
</table>
Degree Programs

MST 2017H The Sources of Norse Myths (PR)
MST 2019H Icelandic Family Sagas (PR)
MST 2021H Insular Literacy 400-1200
MST 2032H Medieval Irish Poetry 500-1600 (PR)
MST 2033H Textual Studies in Medieval Irish Poetry (PR)
MST 2038H Medieval Brittany (PR)
MST 2039H Saints, Monasteries, and Heretics in Medieval Brittany
MST 2040H Beginnings of Medieval Rhetoric and Poetics (PR)
MST 2041H Medieval Allegory
MST 2048H Music in Medieval Life
MST 2050Y Middle Welsh
MST 2055Y Studies in Middle Welsh Texts (PR)
MST 3010Y Augustine of Hippo: Life and Writings
MST 3021H Boethius (PR)
MST 3022H Consolation Through the Ages: Later Medieval Approaches to Boethius’s Consolation of Philosophy (PR)
MST 3025H The Medieval Alexander (PR)
MST 3035H Alexander Neckam: Life and Works (PR)
MST 3101H Current Theory and Medieval Texts: An Introduction
MST 3102H Topics in Current Theory and Medieval Texts (PR)
MST 3103H The Theory of the Middle Ages
MST 3104Y Troubadours and Trouvères
MST 3140Y Medieval Catalan Language and Literature
MST 3150H Medieval French Epic I (PR)
MST 3151H Medieval French Epic II (PR)
MST 3152H Introduction to Old Occitan (PR)
MST 3153H Old Occitan Troubadour Poetry (PR)
MST 3154H British History in French: Wace, Brut (PR)
MST 3155H Chrétien de Troyes, Perceval (PR)
MST 3156H Charlemagne: Facts and Legends
MST 3157H Old French and Old Occitan Crusade Epics (PR)
MST 3162H Boccaccio and Chaucer
MST 3201H Medieval Social History
MST 3203H Topics in Medieval Economic History
MST 3204H Marxism and Premodern History
MST 3205H Violence in Medieval Society
MST 3210H Medieval Spain (PR)
MST 3225H Jews and Christians in Medieval and Renaissance Europe
MST 3230H The Common Law of Medieval Europe
MST 3235H Communal Florence, 1150-1500 (PR)
MST 3236H The Papal Monarchy
MST 3242H The Carolingians and the Birth of Europe
MST 3243H Dark Age Italy
MST 3244H Saints and their Cities in Early Medieval Italy
MST 3259H Medieval Monastic Culture: Lands of St. Benedict
MST 3262H Monastic Identities
MST 3265H Hagiographies and Methodologies

MST 3285H Naming the Rose: Intellectual History of the Later Middle Ages (PR)
MST 3301H Themes in Medieval Philosophy
MST 3305H Property and Poverty in the High Middle Ages (PR)
MST 3306H Augustine on Will and Grace (PR)
MST 3307H Augustine in Transition (PR)
MST 3309H Fear and Loathing in the Middle Ages: Medieval Theories of the Emotions (PR)
MST 3321H Philosophy of Mind in the Middle Ages (PR)
MST 3322H William of Ockham (PR)
MST 3325H Introduction to Medieval Ethical Theory (Twelfth to Fourteenth Century)
MST 3345H Prophets and Philosophers: Theories of Prophecy in the Medieval Islamic, Jewish and Christian Traditions
MST 3346H Medieval Islamic Philosophy
MST 3401H Introduction to Medieval Christianity
MST 3405H Early Christian Monasticism
MST 3415H John Cassian and Early Monasticism in Gaul
MST 3425H Eastern Christianity 325-1453 CE
MST 3501H Introduction to the Medieval Christian Liturgy
MST 9310Y, H Directed Reading
MST 9315Y, H Directed Reading

Music
MUS 1040H Topics in Medieval Music
MUS 1063H Musical Notation of the Middle Ages

Near and Middle Eastern Civilizations
NMC 1311Y Post-Biblical Hebrew: Mishnah and Midrashim
NMC 1324Y Hebrew Legal Codes, Medieval and Modern
NMC 1326Y Topics in Midrashic Literature
NMC 1500Y Archaeology, from Alexander to Muhammad
NMC 2090Y Islamic History to the Fall of Baghdad
NMC 2119H Readings in Medieval Arabic Legal Documents
NMC 2131H Ethics and Education in Medieval Arabic Texts
NMC 2132H Hadith: Classical Religious Literature in Islam
NMC 2133H Medieval Arabic Sources on Islamic Thought
NMC 2135H Story-tellers, Travellers, and Warriors in Medieval Arabic Literature
NMC 2221H Medieval Persian Ethical and Advice Literature
NMC 2222H Persian Mystical Poetry
NMC 2225H History of Medieval Iran and Central Asia
NMC 2226H Readings in Medieval Persian Historical and Documentary Sources
NMC 2500H Early Islamic Art and Architecture
NMC 2515Y The Islamic City
NMC 2520H Western Medieval Islamic Architecture
Degree Programs

NMC 2521H  The Taj Mahal and Its Origins: Medieval Islamic Architecture in Iran, Central Asia, and India
NMC 2526H  Islamic Painting
NMC 2527H  Islamic Decorative Arts
NMC 2540Y  Islamic Archaeology

Philosophy
PHL 2020H  Augustine
PHL 2030H  Aquinas
PHL 2032H  Seminar in Aquinas
PHL 2040H  Medieval Philosophy
PHL 2041H  Seminar in Medieval Philosophy
PHL 2042H  Topics in Medieval Philosophy
PHL 2045H  Late Medieval Philosophy

Religion
RLG 2043Y  Studies in Jewish and Christian Liturgy to the Seventh Century
RLG 3224Y  Early Eastern Christianity
RLG 3225Y  Early Churches in Cross-Cultural Perspective
RLG 3232H  Sacred Space in the Christian Tradition
RLG 3653Y  Jewish Exegetical Traditions in Antiquity
RLG 3941Y  Celtic Mythology
RLG 3944H  Uses of the Bible in the Middle Ages

Slavic Languages and Literatures
SLA 1104H  Introduction to Old Church Slavonic
SLA 1109H  Studies in Old Church Slavonic

Spanish
SPA 2021H  The Politics of Print
SPA 2022H  Books and Borders

Graduate Faculty

Full Members
L Jane Abray - BA, MA, MPh, PhD
Suzanne Akbari - BA, MA, MPhil, PhD
Lawrin Armstrong - BA, MA, MDiv, PhD
Kenneth Bartlett - BA, MA, PhD
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Antonette Healey - BA, MA, PhD
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Peter King - AB, PhD
Juri Kivimae - BA, PhD
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D Ian Lancashire - BA, MA, PhD
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Jens Wollesen - PhD, Dr phil habil

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Natalie Davis - BA, MA, PhD, FAmAcAs, CFBrAc
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Hartwig Mayer - DPhil
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George Rigg - BA, MA, DPhil
Brian Stock - AB, PhD
Robert Taylor - MA, PhD

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Degree Programs

Associate Members
Marjorie Boyle - BA, MA, PhD
Adam Cohen, PHD
Claude Evans – BA, MA, PhD
Alexandra Gillespie - BA, MA, DPhil
Dorothy Haines, BA, MA, PHD
Joan Holland - BA, PhD
Dorothea Kullmann - MA, PhD
Sarah MacLean - BA, MA, PhD
David McDougall - BA, MA, PhD
Ian McDougall - BA, MA, PhD
Martin Pickavé - BA, MA, PhD
Markus Stock – MA, PhD
Robert Sweetman
Molecular Genetics  MMG

Faculty Affiliation
Medicine

Degree Programs Offered
Genetic Counselling  MSc
Molecular Genetics  MSc, PhD

Overview
The Department of Molecular Genetics is located in the Medical Sciences Building, the FitzGerald Building, the Best Institute, the Hospital for Sick Children, and the Mount Sinai Hospital.

The Master of Science program in Genetic Counselling is a full-time professional degree program that prepares students with the academic and clinical skills to provide genetic counselling. Graduates may work as part of a health-care team to gather relevant medical and family histories, to guide further investigations, and to communicate probable or established diagnoses, mode of inheritance, natural history, risk of recurrence, and associated options. This program has been accredited by the American Board of Genetic Counseling.

The Master of Science and the Doctor of Philosophy programs in Molecular Genetics offer 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.

For detailed information on these programs, visit the Department's Web site.

Collaborative Programs
Degree programs that participate in:
1. Biomolecular Structure, see p. 423
   • Molecular Genetics - PhD
2. Developmental Biology, see p. 433
   • Molecular Genetics - PhD
3. Genome Biology and Bioinformatics, see p. 448
   • Molecular Genetics - PhD
4. Neuroscience, see p. 466
   • Molecular Genetics, MSc, PhD

Contact and Address
Web: www.moleculargenetics.utoronto.ca
E-mail: molecular.medgen@utoronto.ca
Telephone: (416) 978-8359
Fax: (416) 978-6885

Degree Programs

Genetic Counselling

Master of Science

Minimum Admission Requirements
• Four-year University of Toronto bachelor's degree with a B+ standing both cumulatively and in the final year, or its equivalent from another university.
• Prerequisite courses in biology, molecular biology/genetics, biochemistry, embryology/developmental biology, statistics, and psychology.
• The development of strong interpersonal skills as evidenced by extracurricular activity is sought in both the application and interview processes.
• Conditional acceptance may be granted to outstanding applicants lacking the above prerequisite courses; in such instances, the courses deemed necessary must be completed with a B+ standing prior to admission.

Program Requirements
• Students must complete 14 required courses (listed below), laboratory and clinical practica with a minimum B standing. Lectures, meetings, and rounds must be attended at a minimum of 85% of scheduled occurrences.
• There is no thesis requirement, but an independent research project consisting of a limited clinical research study, an extensive literature review from a novel viewpoint, or a new case presentation involving clinical, cytogenetic, and molecular work-up will be completed and presented both orally and in written format suitable for publication.
• Students spend 18 months over a 2-year period in full-time attendance.
• Students are encouraged to organize an intervening summer rotation in a geographic location of their choice.

Required Courses
MSC 2010Y  Advanced Concepts in Human Genetic Disease
MMG 1120Y  Clinical Rotations I
MMG 1122Y  Issues in Genetic Counselling I
MMG 1124Y  Principles of Effective Counselling
MMG 1126Y  Clinical Issues in Pregnancy and Child Development
Degree Programs

Molecular Genetics

Master of Science

Minimum Admission Requirements
- Normally a B.Sc. or M.D. degree or equivalent with excellent academic credentials in molecular biology, genetics, microbiology, and/or biochemistry.

Program Requirements
- Successful completion of MMG 1012H (or equivalent) and MMG 1015Y (seminar course).
- A thesis on a research project.
- Defence of the thesis at an oral examination.
- Students are required to spend 12 months in full-time attendance.

Doctor of Philosophy

Minimum Admission Requirements
- Admission via one of two routes:
  - Admission into the PhD program with a completed MSc degree or equivalent from the University of Toronto or another recognized university.
  - Reclassification to the PhD program during the first or second year in the MSc program.
- Attainment of minimum admission standards does not guarantee acceptance into the PhD program.

Program Requirements
- Successful completion of MMG 1012H (or equivalent) and MMG 1015Y (seminar course), MMG 1016H (or equivalent), and MMG 1017H.
- A thesis on a research project.
- Students entering the doctoral program from a master's program, either through transfer or admission, are required to spend a minimum of two sessions in full-time attendance.

Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>JBB 1425H</td>
<td>Biophysical Methods</td>
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<tr>
<td>JBB 2025H</td>
<td>Protein Crystallography</td>
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<tr>
<td>JDB 1025Y</td>
<td>Developmental Biology</td>
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<tr>
<td>MMG 1012H</td>
<td>Topics in Molecular and Medical Genetics I (formerly MMG 1012Y)</td>
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<tr>
<td>MMG 1015Y</td>
<td>Seminar</td>
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<tr>
<td>MMG 1016H</td>
<td>Topics in Molecular and Medical Genetics II (formerly MMG 1014Y)</td>
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<tr>
<td>MMG 1017H</td>
<td>Topics in Molecular and Medical Genetics III</td>
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<tr>
<td>MMG 1420H</td>
<td>Regulation of Gene Expression</td>
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<tr>
<td>MMG 1425H</td>
<td>Signal Transduction and Cell Cycle Regulation</td>
</tr>
<tr>
<td>MMG 1451H</td>
<td>Genetic Analysis of Development: Yeast and Worms</td>
</tr>
</tbody>
</table>

Graduate Faculty

Full Members
Brenda Jean Andrews - BSc, PhD, FRSC
Irene Andrulis - BA, PhD
Jane Aubin - BSc, PhD
Gary Bader - BScPhD
Alan Bernstein - BSc, PhD, FRSC
Benjamin Blencowe - BSc, PhD
Andrew Bognar - BSc, PhD
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Martha Brown - BSc, MSc, PhD
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Joseph Culotti - BS, PhD, Canada Research Chair
Alan Richard Davidson - BSc, PhD (Coordinator of Graduate Studies)
James Dennis - BSc, MSc, PhD, Canada Research Chair
W. Brent Derry - BSc, MSc, PhD
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Daniel Durocher - BSc, PhD
Aled Edwards - BSc, PhD
Sean Egan - BSc, PhD
James Ellis - BSc, PhD
Andrew Emili - BSc, MSc, PhD
Lori Frappier - BSc, PhD, Canada Research Chair
Barbara Funnell - BSc, PhD
Brenda Gallie - MD
Anne-Claude Gingras
Scott Gray-Owen - BSc, PhD
Jack Greenblatt - BSc, PhD, University Professor
Thomas J Hudson - MD
Timothy Hughes - BM, BSE, PhD, Canada Research Chair

*Listing (course description) in the Faculty of Arts and Science Calendar, Molecular Genetics and Molecular Biology Program.

*Course which may continue over a program. The course is graded when completed.
Chi-Chung Hui - BSc, MPhil, DSc
C James Ingles - BSc, PhD
Sadhna Joshi-Sukhwat - BSc, MSc, PhD, DSc
David Kaplan - BA, PhD, Canada Research Chair
Lewis Kay - BSc, PhD, Canada Research Chair
Henry Krause - BSc, PhD
Brigitte Lavoie - PhD
Susanna Lewis - BSc, PhD
Howard Lipshitz - BSc, MPhil, PhD, Canada Research Chair (Chair)
Jun Liu - BSc, PhD
Roderick McInnes - BSc, MD, PhD, University Professor
Helen McNeill - BS, PhD
Marc Meneghini - BSc, PhD
Michael Meyn - MD, MSc, PhD
Freda Miller - BSc, PhD, FRSC, Canada Research Chair
Jason Moffat - BSc, PhD
Michael Moran - BSc, PhD
Quaid Morris - BSc, PhD
Andras Nagy - BA, MA, PhD
William Navarre - BSc, PhD
Corey Nislow - BS, PhD
Lucy Osborne - BSc, MSc, PhD
Emil Pai - DrRerNat, Canada Research Chair
John Parkinson - PhD, BSc
Anthony Pawson - BA, PhD, Order of Ontario, University Professor
Christopher Pearson - BSc, PhD
Laurence Pelletier - BSc, MSc, PhD
Peter Ray - BSc, MSc, PhD
James Rini - BSc, PhD
John Roder - BA, PhD, Canada Research Chair
Johanna Rommens - BSc, PhD
Janet Rossant - BA, PhD, University Professor
Peter John Roy - BS, PhD, Canada Research Chair
Stephen Scherer - BSc, MSc, PhD
Ian Scott - BSc, PhD
Jacqueline Segall - BSc, PhD
Frank Sicheri - BSc, PhD
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Andrew Spence - BSc, PhD
Igor Stagljar - BSc, PhD
Boris Steipe - MD, PhD
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Michael Tyers - BSc, PhD, Canada Research Chair
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Andrew Rhys Wilde - BSc, PhD, Canada Research Chair
Shoshana Wodak - MD, PhD
Jeff Wrana - BSc, PhD, Canada Research Chair
Zhaolei Zhang - BS, PhD
Mei Zhen - BSc, PhD, Canada Research Chair

Members Emeriti
Andrew Becker - MD, PhD
Manuel Buchwald - AB, PhD
James Campbell - BSc, PhD
Jeremy Carver - BA, PhD
Voon Chan - BSc, MSc, PhD
Marvin Gold - BA, PhD
Jiri Krepsinsky - BSc, PhD

Helios Murialdo - MSc, PhD
John Penner
Paul Sadowski - MD, PhD
Louis Siminovitch - BSc, PhD
Margaret Thompson - BA, PhD

Associate Members
Ryana Babul-Hirji - MSc
David Chitayat - MD
Joe Clarke - MD, PhD
Cheryl Cytrynbaum - BSc, MS, CGC, ABGC
Harriet Drucker - BSc, MSc
Lucie Dupuis - MSc
A Feigenbaum - MD, CHB, FRCP(C)
Guri Giaever - BS, PhD
Christine Harrison - PhD
Amy Kaiser - BA
Regan Kliatt - BSc, MSc
Gideon Koren - MD, FRCP(C)
Trudo Lemmens - Candlur, Liclur, LLM
Roberto Mendoza - MS, MD
Marjan Nezralati - MD
Nada Quercia - MSc
Andrea Shugar
Cheryl Shuman - MSc
Leslie Steele - BSc, MSc
Joanne Sutherland - MS
Ahmad Teebi - MD
Ikuko Eileen Teshima - BSc, MSc, PhD, FCCMG, FACMG
Michal Thomas - MSc
Sheila Unger
Sunita Vohra
Rosanna Weksberg - BSc, MSc, PhD, MD
Elizabeth Winsor - BSc, MSc, PhD
Grace Yoon - BSc, MD
Degree Programs

Music MUS

Faculty Affiliation
Music

Degree Programs Offered
Composition – MMus, DMA
Music Education, Musicology, Ethnomusicology – MA, PhD
Performance – MMus, DMA

Collaborative Programs Offered
Degree programs that participate in:
1. Book History and Print Culture, see p. 424
   • Music, MA, PhD
2. Editing Medieval Texts, see p. 437
   • Music, PhD
3. South Asian Studies, see p. 471
   • 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 five areas of concentration and fosters the institutional alliance of all areas of advanced music study. In addition to our longstanding graduate degrees in the areas of composition, music education, and musicology, we have recently introduced master’s and doctoral degree specialisations in ethnomusicology as well as a doctoral degree in performance. Although music theory is not offered as a named degree specialisation, students in this field of study are welcome to enrol in our musicology degree programs. Graduates from all areas of our program occupy leading positions in music departments across Canada and around the world.

Contact and Address
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Telephone: (416) 978-5772
Fax: (416) 946-3353

Graduate Department of Music
Edward Johnson Building
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Toronto, Ontario M5S 2C5
Canada

Degree Programs

Composition

Master of Music

Minimum Admission Requirements
• Applicants for the Master of Music (MusM) in composition must hold a Bachelor of Music degree in the area of specialisation 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 university. Applicants whose undergraduate degree does not meet this standard may be required to take appropriate prerequisite courses.
• Applicants in composition must submit several original compositions, at least one of which shall be with moderately large instrumentation.

Program Requirements
• Minimum of 6.0 full-course equivalents (FCE) taken over two years, including MUS 3100Y and its continuation MUS 3105Y.
• Students may be required to take additional courses based on the results of diagnostic tests in musical analysis, counterpoint, and harmony given upon entrance.
• 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.

Doctor of Musical Arts

Minimum Admission Requirements
• Applicants for the Doctor of Musical Arts (DMA) in composition must hold the degree of Master of Music in composition from the University of Toronto, or its equivalent from another 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.

Program Requirements
• Students take a minimum of 5.0 full-course equivalents (FCE), including MUS 3300Y, MUS 3305Y, and MUS 3999Y (research project, 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.
• Upon completion of course work, students are required to present a recital of original works (MUS 3888Y) to the satisfaction of the department. In some cases professional quality tapes of perform-

294 Music
ances totalling the equivalent of a full recital may be substituted.
• The thesis for the Doctor of Musical Arts shall be an extended composition approved by the department, prepared under the supervision of an advisory committee and defended at the final oral examination.
• Students must complete all requirements for the DMA within six years.

Courses
Final course offerings may vary. Students should consult the departmental handbook.

MusM/DMA in Composition
MUS 3100Y MusM Advanced Composition I
MUS 3101H Seminar in Schenkerian Analysis I
MUS 3105Y MusM Advanced Composition II
MUS 3110H Classical Orchestration
MUS 3222H Composing for Film
MUS 3300Y DMA Advanced Composition I
MUS 3305Y DMA Advanced Composition II
MUS 3309H Brahms: Symphonies and Chamber Music
MUS 3404H Extended Tonal Techniques in the Twentieth Century
MUS 3410H Advanced Analysis: 1850-1910
MUS 3412H Theories of Rhythm and Metre
MUS 3420H Composing for Percussion
MUS 3512H Research in Composition
MUS 3800H Electroacoustic Music
MUS 3888Y DMA Recital of Works
MUS 3999Y Research Project (DMA)
MUS 4615H Analysis and Performance Practices of Twentieth-Century Music

Music Education

Master of Arts

Minimum Admission Requirements
• 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 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.
• Appropriate letters of reference commenting on professional performance and promise are also required.

Program Requirements
• Students may complete the degree program full-time or part-time.
• Students complete 4.0 full-course equivalents (FCE) including:
  o A minimum of 2.5 FCE in music education, including Research Methods in Music Education (MUS 2111H) and Philosophy and Music Education (MUS 2151H)
  o Elective courses may be chosen from the MA/PhD/MusM/DMA courses of instruction and/or other graduate courses available in the University, subject to the approval of the department
  o A major essay (MUS 2990Y) may be substituted for 1.0 FCE with the approval of the department
• Pass a comprehensive examination in music education (written and oral).
• All degree requirements must be completed within five years of first enrolment.

Doctor of Philosophy

Minimum Admission Requirements
• Applicants must hold a master's degree in music education from this university with an average standing of B+ or better, or an equivalent degree and standing from another 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.
• Applicants must provide their results on the Miller Analogies Test.
• At the discretion of the faculty, applicants may be required to provide a videotape of their teaching expertise.
• Appropriate letters of reference commenting on the applicant's teaching experience, music performance ability, and academic ability.

Program Requirements
• 6.0 full-course equivalents (FCE) including:
  o At least 2.0 FCE (including MUS 2995Y Music Education Doctoral Research Project) must be taken from the departmental offerings in music education.
  o The balance of the student's required program must be approved by the department and may include courses from the MA/MusM/PhD/DMA list and/or from another graduate unit.
• Students must be registered full time, on campus for a minimum of two sessions, in order to be in such geographical proximity as to be able to participate fully in the department's activities associated with the program.

Music 295
Degree Programs

- Language requirements, if any, will be established by the student’s advisory committee, based on specific research needs.
- As early as possible in year 2, the student will submit a thesis proposal which must be approved by the end of that year.
- 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.

Courses
Final course offerings may vary. Students should consult the departmental handbook.

MA/PhD in Music Education
MUS 2010H Seminar in Music Education
MUS 2111H Research Methods in Music Education
MUS 2151H Philosophy and Music Education
MUS 2180H Seminar in Canadian Music Education
MUS 2182H Issues in Music Education
MUS 2199H* Special Topics in Music Education
MUS 2222H Choral Literature and Conducting I
MUS 2223H Choral Literature and Conducting II
MUS 2990Y* MusM Major Essay (Music Education)
MUS 2995Y* Music Education Doctoral Research Project
MUS 2998H Reading in Advanced Topics in Music Education
Other courses

Musicology

Master of Arts

Minimum Admission Requirements
- Applicants to the MA in musicology/theory are accepted under the general regulations.
- University of Toronto Bachelor of Arts specialist degree or the Bachelor of Music degree with an average standing of mid-B or better over the final two years, or equivalent standing from another university. 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.

Program Requirements
- The two-year MA program in musicology requires 6.0 full-course equivalents (FCE) including:
  - Introduction to Music Research I and II (MUS 1000H and MUS 1001H) in year 1.

Other courses

We advocate interdisciplinarity with ethnomusicology, and while the majority of electives chosen will reflect traditional scholarship in Western art music, others may be chosen to provide a broader base that includes non-Western and popular musics. To reinforce the notion of interdisciplinarity, up to 1.0 FCE may be taken from another graduate unit.

- The primary means of evaluating quality are research essays and seminar presentations. The MA Major Paper (MUS 1990H) is optional.
- 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 will ordinarily be German except by petition to the department. We encourage the completion of the language requirement at the earliest possible opportunity.

Doctor of Philosophy

Minimum Admission Requirements
- The PhD in musicology 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.
- Essay of approximately 3,000 words which demonstrates their ability to handle a research problem.
- Applicants, whether from the University of Toronto or from elsewhere, may be interviewed by the department.
- Exceptional students may be admitted directly to the doctoral stream with an appropriate bachelor’s degree.

Program Requirements

From a master’s degree.
- Applicants admitted with a master’s degree in musicology, ethnomusicology, or theory must complete a minimum of 3.0 full-course equivalents (FCE):  
  - The PhD Seminar (MUS 1250H) is taken in the first session.
  - Course work should be completed during year 1 of study with an average grade of at least A; the exception is MUS 1999H, which lays the groundwork for the major 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.

Students may be required to take additional courses or acquire other skills to meet the needs of their proposed subjects of study.
- Students must demonstrate advanced reading knowledge of German; however, with departmental permission, another non-English language may be substituted, provided it is required for the approved research. Advisory committees may require competence in additional languages. All remaining course

*Courses which may continue over a program. The course is graded when completed.
and language requirements, including the field exam, must be completed successfully by the end of year 2.

- Prepare a thesis and defend it at a final examination.

From a bachelor's degree.
- 3.0 FCE at the graduate level must be completed in year 1 with a minimum average of A-; this is a prerequisite to undertaking the requirements listed above for students with master's degree in hand.

Ethnomusicology

Master of Arts

Minimum Admission Requirements

- Applicants to the MA in ethnomusicology are accepted under the general regulations.
- University of Toronto Bachelor of Arts specialist degree or the Bachelor of Music degree with an average standing of mid-B or better over the final two years, or the equivalent standing from another university. 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.

Program Requirements

- The two-year MA program in the field of ethnomusicology requires 6.0 full-course equivalents (FCE) including:
  - Introduction to Music Research I and II (MUS 100H and MUS 101H) in year 1.
  - Fieldwork Methods and Practicum (MUS 102H), offered in alternate years.
  - We advocate interdisciplinarity with musicology, and while the majority of electives reflect sociomusical scholarship of non-Western and popular musics, others provide a broader base that includes traditional scholarship in Western art music. To reinforce the notion of interdisciplinarity, up to 1.0 FCE may be taken from another graduate unit.
  - The primary means of evaluating quality are research essays and seminar presentations. The MA Major Paper (MUS 1990H) is optional.
- 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.

Doctor of Philosophy

Minimum Admission Requirements

- The PhD in ethnomusicology 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.
- Exceptional students may be admitted directly to the doctoral stream with an appropriate bachelor's degree (direct entry).

Program Requirements

From a master's degree:
- Students are required to take 3.0 full-course equivalents (FCE). 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. By the end of year 1, 2.5 FCE must be completed with at least a grade of A.
- Advanced oral and reading knowledge of a language other than English is required: this should be relevant to a student's musical and scholarly interest. 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.
- During year 1, students are expected to discuss their interests, expectations, and research objectives with faculty members. An appropriate supervisor of MUS 1997H must then be agreed upon. The supervisor will be primarily responsible for determining the structure and content of MUS 1997H, which will include a research paper.
- All course requirements must be completed by the end of year 2.

From a bachelor's degree (direct entry):
- An intermediate-level language examination must be taken in year 1. All language requirements must be completed by year 3.
- Students must take 3.0 FCE in year 1, exclusive of MUS 1250H and MUS 1997H. An average grade of at least A- must be maintained to continue with the doctorate; otherwise, the student will be required to
transfer into the master's program. Successful students go on to take 3.0 more FCE in year 2, inclusive of MUS 1250H in the first session and MUS 1997H from the beginning of the second session.
- All course requirements must be completed by the end of year 3.

Courses
Final course offerings may vary. Students should consult the departmental handbook.

MA/PhD in Musicology/Ethnomusicology
MUS 1000H Introduction to Music Research I
MUS 1001H Introduction to Music Research II
MUS 1204H Orientalism and Opera: Interdisciplinary Approaches
MUS 1215H Music in Cities and Courts 1575-1750
MUS 1243H The Italian in Handel
MUS 1244H Rhythm and Metre in Cross-Cultural Perspective
MUS 1246H Music and Colonialism
MUS 1250H PhD Seminar
MUS 1317H Music in Canada
MUS 1990H MA Major Paper
MUS 1997H Research in Ethnomusicology
MUS 1998H Individual Reading and Research
MUS 1999H Research in Musicology
MUS 3101H Seminar in Schenkerian Analysis I
MUS 3309H Brahms: Symphonies and Chamber Music
MUS 3412H Theories of Rhythm and Metre
MUS 4444Y and MUS 4445Y (applied lessons)
MUS 4600H; MUS 4610H; MUS 4615H
Advanced Song Studies for Pianists (MUS 4504H)
Sonata Coaching I (MUS 4506H)
Advanced Repertoire for Singers and Pianists II (MUS 4214H)
Performance Studies I: Piano-Instrumental Master Class (MUS 4730H)
Collaborative Piano Studio Class (MUS 4502H)
Based on the outcome of preliminary consultations with the department, students may be required to take Advanced Diction Studies (MUS 4500H).
- Two recitals.

Performance
Master of Music
Field - Collaborative Piano

Program Requirements
- 7.0 full-course equivalents (FCE) including:
  - 1.0 FCE in music literature (MUS 4200Y), normally taken in year 1
  - 1.0 FCE selected from MUS 4600H; MUS 4610H; MUS 4615H
  - Advanced Song Studies for Pianists (MUS 4504H)
  - Sonata Coaching I (MUS 4506H)
  - Advanced Repertoire for Singers and Pianists II (MUS 4214H)
  - Performance Studies I: Piano-Instrumental Master Class (MUS 4730H)
  - Collaborative Piano Studio Class (MUS 4502H)
  - Based on the outcome of preliminary consultations with the department, students may be required to take Advanced Diction Studies (MUS 4500H).
- Two recitals.

Performance
Master of Music
Field - Conducting

Program Requirements
- 6.0 full-course equivalents (FCE) including:
  - 1.0 FCE in music literature (MUS 4200Y, normally taken in year 1)
  - 1.0 FCE selected from: MUS 4600H or MUS 4606H; MUS 4610H; MUS 4615H.
  - Orchestral conducting majors must also complete MUS 4220H, MUS 4221H, MUS 4222Y, MUS 4223H, and MUS 4700H (choral).
  - Wind ensemble conducting majors must also complete MUS 4226H, MUS 4227H, and MUS 4228Y.
  - Choral conducting majors must also complete MUS 4223H, MUS 4224H, MUS 4225Y, MUS 4220H, and MUS 4700H (choral).
- Two public performances.

Performance
Master of Music
Field - Instrumental

Program Requirements
- 7.0 full-course equivalents (FCE) of which 5.0 FCE must include:
  - MUS 4444Y and MUS 4445Y (applied lessons)
  - 1.0 FCE in music literature (MUS 4200Y) normally taken in the first year of the program

Courses which may continue over a program. The course is graded when completed.
Degree Programs

Performance
Master of Music
Field – Jazz

Program Requirements
• 7.0 full-course equivalents (FCE) including:
  o MUS 4444Y, MUS 4445Y, MUS 4300Y, normally taken in year 1
  o MUS 4606H, MUS 4615H
  o either MUS 4310Y, MUS 4311Y, or 1.0 FCE chosen from a specified list approved by the department
  o Students must also include in their programs 1.0 FCE selected from one or more of the following areas:
    o Small Group Jazz Ensemble Performance (MUS 4740H, MUS 4741H, MUS 4742H, MUS 4743H)
    o Jazz Orchestra (MUS 4750H, MUS 4751H, MUS 4752H, MUS 4753H), or
    o Vocal Jazz Ensemble (MUS 4760H, MUS 4761H, MUS 4762H, MUS 4763H)
  • Two recitals; however students may elect to replace one recital with a significant recording project.

Performance
Master of Music
Field – Vocal

Program Requirements
• 7.0 full-course equivalents (FCE) as follows:
  o MUS 4444Y and MUS 4445Y (applied lessons)
  o 1.0 FCE in music literature (MUS 4200Y), normally taken in year 1
  o 1.0 FCE selected from MUS 4600H; MUS 4610H; MUS 4615H
  o MUS 4770H; MUS 4771H; MUS 4772H; and MUS 4773H
  o 1.0 FCE chosen from MUS 2122H; MUS 4730H-4733H; MUS 4620Y; or from a list of courses approved by the department
  • Two recitals.

Performance
Master of Music
Field – Vocal Pedagogy

Program Requirements
• 7.0 full-course equivalents (FCE) as follows:
  o MUS 4444Y and MUS 4445Y (applied lessons)
  o 1.0 FCE in music literature (MUS 4200Y), normally taken in program year 1
  o 1.0 FCE selected from MUS 4600H or MUS 4606H; MUS 4610H; MUS 4615H
  o 1.0 FCE chosen from a specified list approved by the department
  • Two recitals. Recitals may include a chamber music component with the approval of the department.
Degree Programs

Performance

Doctor of Musical Arts

Minimum Admission Requirements
- Applicants for the Doctor of Musical Arts (DMA) in performance must hold the degree of Master of Music 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.

Program Requirements
- Applicants must complete a minimum of 5.0 full-course equivalents (FCE) as follows:
  - DMA Seminar (MUS 4800H) is taken in the first session
  - Work on Research in Performance (MUS 4899H) is begun in the second session
  - Advanced Applied Music I and II (MUS 4844Y and MUS 4845Y)
  - Remaining 2.0 FCE must be graduate seminar courses
- Course work should be completed by the end of year 2 with an average grade of at least A-. Exceptions to the time of completion are Research in Performance (MUS 4899H), which lays the groundwork for the dissertation research and leads to a major field examination in the middle of year 2, and Advanced Applied Music II (MUS 4845Y). Students may be required to take additional courses or acquire other skills to meet the needs of their proposed areas of study.
- Three DMA recitals - MUS 4866Y, MUS 4877Y, MUS 4888Y. The format of these recitals will be determined in consultation with the major teacher and the supervisory committee.
- Reading knowledge in 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.

Courses
- Final course offerings may vary. Students should consult the departmental handbook.

MusM/DMA in Performance
MUS 4200Y Seminar in Music Literature
MUS 4219H Perspectives on the Business of Music Performance
MUS 4220H Orchestral Conducting I
MUS 4221H Orchestral Conducting II
MUS 4222Y Advanced Orchestral Conducting
MUS 4223H Choral Conducting I
MUS 4224H Choral Conducting II
MUS 4225Y Advanced Choral Conducting
MUS 4226H Wind Ensemble Conducting I
MUS 4227H Wind Ensemble Conducting II
MUS 4231H Advanced Vocal Repertoire Study I
MUS 4232H Advanced Vocal Repertoire Study II
MUS 4241H Advanced Vocal Pedagogy and Vocolody
MUS 4248H Optimizing the Singing Mind
MUS 4270H Piano Pedagogy – Beginning and Intermediate Levels
MUS 4271H Practicum - Beginning and Intermediate Levels
MUS 4300Y Seminar in Jazz Studies
MUS 4310Y Advanced Jazz Composition and Arranging I
MUS 4311Y Advanced Jazz Composition and Arranging II
MUS 4444Y Applied Music I
MUS 4445Y Applied Music II
MUS 4500H Advanced Diction Studies
MUS 4504H Advanced Song Studies for Pianists
MUS 4506H Sonata Coaching I
MUS 4507H Sonata Coaching II
MUS 4510H Opera Performance for Pianists
MUS 4512H Operatic Répétiteur
MUS 4600H Performance Practices Before 1800
MUS 4606H Special Topics in Performance Practice
MUS 4610H Analysis and Performance: Music of the Eighteenth and Nineteenth Centuries
MUS 4615H Analysis and Performance Practices of Twentieth-Century Music
MUS 4620Y Advanced Performance Studies
MUS 4700H Major Ensemble I
MUS 4701H Major Ensemble II
MUS 4702H Major Ensemble III
MUS 4703H Major Ensemble IV
MUS 4706H Contemporary Chamber Ensemble I
MUS 4707H Contemporary Chamber Ensemble II
MUS 4708H Contemporary Chamber Ensemble III
MUS 4709H Contemporary Chamber Ensemble IV
MUS 4710H Chamber Music I
MUS 4711H Chamber Music II
MUS 4712H Chamber Music III
MUS 4713H Chamber Music IV
MUS 4714H Chamber Choir I
MUS 4715H Chamber Choir II
MUS 4716H Chamber Choir III
MUS 4717H Chamber Choir IV
MUS 4720H Opera I
MUS 4721H Opera II
MUS 4722H Opera III
MUS 4723H Opera IV
MUS 4730H Performance Studies I
MUS 4731H Performance Studies II
MUS 4732H Performance Studies III
Degree Programs

Music

MUS 4733H Performance Studies IV
MUS 4740H Small Group Jazz Performance I
MUS 4741H Small Group Jazz Performance II
MUS 4742H Small Group Jazz Performance III
MUS 4743H Small Group Jazz Performance IV
MUS 4750H Jazz Orchestra I
MUS 4751H Jazz Orchestra II
MUS 4752H Jazz Orchestra III
MUS 4753H Jazz Orchestra IV
MUS 4760H Vocal Jazz Ensemble I
MUS 4761H Vocal Jazz Ensemble II
MUS 4762H Vocal Jazz Ensemble III
MUS 4763H Vocal Jazz Ensemble IV
MUS 4770H Oratorio Ensemble I
MUS 4771H Oratorio Ensemble II
MUS 4772H Oratorio Ensemble III
MUS 4773H Oratorio Ensemble IV
MUS 4774H Early Music Instrumental Ensemble I
MUS 4775H Early Music Instrumental Ensemble II
MUS 4776H Early Music Instrumental Ensemble III
MUS 4777H Early Music Instrumental Ensemble IV
MUS 4780H World Music Ensemble I
MUS 4781H World Music Ensemble II
MUS 4782H World Music Ensemble III
MUS 4783H World Music Ensemble IV
MUS 4785H Orchestral Studies I
MUS 4786H Orchestral Studies II
MUS 4787H Orchestral Studies III
MUS 4788H Orchestral Studies IV
MUS 4790H Instrumental Performance Class I
MUS 4791H Instrumental Performance Class II
MUS 4792H Instrumental Performance Class III
MUS 4793H Instrumental Performance Class IV
MUS 4795H Piano/Instrumental I
MUS 4796H Piano/Instrumental II
MUS 4797H Piano/Instrumental III
MUS 4798H Piano/Instrumental IV
MUS 4800H DMA Seminar
MUS 4844Y Advanced Applied Music I
MUS 4845Y Advanced Applied Music II
MUS 4866Y DMA Recital I
MUS 4877Y DMA Recital II
MUS 4888Y DMA Recital III
MUS 4899H Research in Performance
MUS 4900Y Operatic Studies I
MUS 4901Y Operatic Studies II
MUS 4966Y Operatic Roles I
MUS 4968Y Operatic Roles II
MUS 5700H Piano Master Class I
MUS 5701H Piano Master Class II
MUS 5702H Piano Master Class III
MUS 5703H Piano Master Class IV
MUS 5710H Early Music Vocal Ensemble I
MUS 5711H Early Music Vocal Ensemble II
MUS 5712H Early Music Vocal Ensemble III
MUS 5713H Early Music Vocal Ensemble IV
MUS 6666Y Recital I
MUS 8888Y Recital II

Courses recognized for MusM in Performance and MA graduate credit
Available to MA students only with the permission of the department.

MUS 1030H Topics in Romantic Music
MUS 1040H Topics in Medieval Music
MUS 1090H Topics in Ethnomusicology

Graduate Faculty

Full Members
Gage Averill - BA, PhD
Lee Bartel - BA, BMus, MEd, PhD
William Bowen - BA, BMus, MA, PhD
M. Celia Cain - MA, PhD
Ka Nin Chan - BSc, BMus, MMus, MusD
Caryl Clark - BMus, MA, PhD
Lori Anne Dolloff - MusB, PhD
Darryl Edwards - MMus, DMA
Robin Elliott - PhD, Chalmers Chair in Canadian Music
Elizabeth Gould - BM, MA, DMA
John Haines - PhD, Canada Research Chair
J Russell Hartenberger - BMus, MMus, PhD (Associate Dean, Graduate Education)
Christos Hatzis - MM, PhD
Sandra Horst - MM
Bina John
Gregory Johnston - BMus, MA, PhD
Gaynor Grey Jones - BA, MA, PhD
James Kippen - BA, PhD
Midori Koga - BMus, MMus, DMA
John Kruspe - MusBac
Gary Kulesha - ARCT, AMusTCL
Sherry Lee - BMus, MA, PhD
Lorna Macdonald - BME, MM, Lois Marshall Chair in Voice
Gillian MacKay - BMus, MMus, DMus
Ryan McClelland
Kenneth McLeod - MA, PhD
James Parker - MM, DMA (Rupert E Edwards Chair in Piano)
Paul Read - BEd, MusBac, MusM
Doreen Rao - BS, MM, PhD, Elmer Iseler Chair in Conducting
Alexander Rapoport - MusDoc
Jeffrey Reynolds - BA, BMus, MMus, MA, PhD
Timothy Ries
Shauna Rolston - BA, MM
Annette Sanger - BAMusic, PhD
Patricia Shand - BA, MMus, EdD, ARCT
Henri-Paul Sicsic
Cameron Walter - BMus, MMus, EdD

*Courses which may continue over a program. The course is graded when completed.*
Members Emeriti
William Aide - BSc, ARCT, LRCT
Raffi Armenian - BS
David Beach - BA, MusM, PhD
Andrew Hughes - MA, DPhil, University Professor Emeritus
Edward Laufer - MusBac, MFA, MusM

Associate Members
Michael Albano
David Fallis
Mary Haines - MMus
Harcus Hennigar
David Hetherington
Kevin Komisaruk - BMus, MMus, DMus
Che Anne Loewen - MM
Mary Morrison - ArtDip
Charlotte Nediger
Marietta Orlov - MAPerf
Jeff Packman
Annalee Patipatanakoon
Katharine Rapoport
Mark Sallmen - MA, PhD
Clare Scholtz
Nancy Sicsic
Alan Stanbridge - BSc, MA, PhD
Ivars Taurins
Camille Watts
Lydia Wong - MusBac
Degree Programs

Near and Middle Eastern Civilizations  NMC

Faculty Affiliation
Arts and Science

Degree Programs Offered
Near and Middle Eastern Civilizations – MA, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Jewish Studies, see p. 460
   • Near and Middle Eastern Civilizations, PhD
2. Women and Gender Studies, see p. 473
   • Near and Middle Eastern Civilizations, MA, PhD

Overview
The Department of Near and Middle Eastern Civilizations offers graduate programs leading to the Master of Arts and Doctor of Philosophy in two fields, listed below with their areas of specialization:

Ancient Near Eastern Studies
Near Eastern Archaeology (Egyptian, Mesopotamian, Syro-Palestinian, Islamic)
Assyriology
Near Eastern History
Egyptology
Hebrew and Judaic Studies
Aramaic-Syriac Studies

Middle Eastern and Islamic Studies
Syriac
Arabic Studies
Persian Studies
Turkish Studies
History of the Islamic World and the Modern Middle East
Islamic Religion and Philosophy
Islamic Art and Material Culture

Contact and Address
Web: www.utoronto.ca/nmc
Telephone: (416) 978-3181
Fax: (416) 978-3305

Department of Near and Middle Eastern Civilizations
Second Floor, 4 Bancroft Avenue
University of Toronto
Toronto, Ontario  M5S 1C1
Canada

Degree Programs

Master of Arts

Minimum Admission Requirements
• Four-year BA 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 training in a primary source language.
• Students choosing a concentration in Islamic Art and Material Culture must have a reading knowledge of French or German at the time of admission.

Program Requirements
• Depending upon the amount of undergraduate preparation, students may be enrolled in either a two-year or a one-year program.
• Students choosing a concentration in Islamic Art and Material Culture are required to successfully complete at least 6.0 full-course equivalents (FCE) in Art and Near and Middle Eastern Civilizations (a minimum of 2.0 FCE in each). This is normally a two-year program.

Doctor of Philosophy

Minimum Admission Requirements
• Admission via one of two routes:
  o 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.
  o 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.

Program Requirements
• Program of study is determined in consultation with the Department and includes written and oral general examinations. These examinations will be taken no later than January in the year following the completion of course work for the PhD program.
• Students are required to demonstrate reading comprehension in two languages of modern scholarship (typically French and German), the first by the end of their first year in residence, and the second by the end of their second year of residence. Other languages, such as Arabic or Modern Hebrew, may be substituted as appropriate. In some cases, the Department may require competence in another lan-
Degree Programs

- Students are required to be registered on campus for the period during which course work requirements are being fulfilled, and in no case for less than two academic years.
- The minimum course requirement will normally be 6.0 graduate full-course equivalents (FCE). In approved cases, up to 3.0 FCE may be applied from the U of T MA program or its equivalent, at the discretion of the Department.

Courses

Akkadian Language and Literature
NMC 1001Y Introduction to Old Babylonian
NMC 1002Y Selected Standard Babylonian Texts
NMC 1003Y Akkadian Historical Texts
NMC 1006Y Akkadian Literary Texts
NMC 1007Y Akkadian Letters and Business Documents (Early Period)
NMC 1008Y Akkadian Letters and Business Documents (Late Period)

Ancient Egyptian Language and Literature
NMC 1201Y Introduction to Middle Egyptian Dialect
NMC 1202Y Middle Egyptian Texts
NMC 1203Y Late Egyptian Texts
NMC 1204Y Cursive Scripts
NMC 1207H Introduction to Demotic
NMC 1209Y Old Egyptian Texts
NMC 1210Y Ancient Egyptian Historical Texts
NMC 1213Y Egyptian Religious and Funerary Literature

Arabic Studies
NMC 2100Y Intensive Arabic I
NMC 2101Y Intensive Arabic II
NMC 2102Y Advanced Standard Arabic
NMC 2117H Readings in Medieval Arabic Chronicles
NMC 2118H Readings in Medieval Arabic Biographical Literature
NMC 2119H Readings in Medieval Arabic Legal Documents
NMC 2120Y Readings from Muslim Chronicles of the Crusades
NMC 2130Y Topics in Arabic Literature
NMC 2131H Ethics and Education in Medieval Arabic Texts
NMC 2132H Hadith: Classical Religious Literature in Islam
NMC 2133H Medieval Arabic Sources on Islamic Thought
NMC 2134H Classical Arabic Poetry
NMC 2135H Story-tellers, Travellers and Warriors in Medieval Arabic Literature

Aramaic-Syriac Language and Literature
NMC 1100Y Introduction to Aramaic
NMC 1101Y Early Syriac Texts
NMC 1102Y Palestinian Aramaic Texts
NMC 1104Y Aramaic Epigraphy
NMC 1105Y Syriac Historical Texts
NMC 1106Y Syriac Exegetical Texts
NMC 1110H Palestinian Targum
NMC 1111Y Babylonian Aramaic

Archaeology
NMC 1400Y Introduction to the Archaeology of the Near East
NMC 1401Y Prehistory of Western Asia
NMC 1403H Art of Egypt
NMC 1405Y Seminar in the Archaeology of Western Asia (1)
NMC 1406Y Problems in the Archaeology of Bronze Age Syria-Palestine
NMC 1407Y Problems in the Archaeology of Iron Age Syria-Palestine
NMC 1408Y Seminar in the Archaeology of Syria-Palestine
NMC 1409H Archaeology and Material Culture of Ancient Egypt I
NMC 1410H Archaeology and Material Culture of Ancient Egypt II
NMC 1411H Near Eastern Ceramics (1)
NMC 1412H Near Eastern Ceramics (2)
NMC 1414H Egyptian Artifacts
NMC 1415H Archaeology in Egyptian Art
NMC 1416H Egyptian Iconography
NMC 1417H Architecture of Egypt
NMC 1418Y Archaeology of Nubia
NMC 1419Y Art, Archaeology and Culture of Egypt in the Age of the Pyramids
NMC 1420Y Selected Topics in Near Eastern Archaeology
NMC 1421Y Seminar in Egyptian Archaeology
NMC 1422Y Polarized-light Microscopy in Archaeology
NMC 1500Y Archaeology, from Alexander to Muhammad
NMC 2540Y Islamic Archaeology

Gender-Related Topics in Law and Religion
NMC 1608H Life Cycle and Personal Status in Judaism
NMC 1609H Gender-Related Topics in Law and Religion

Hebrew Language and Literature
NMC 1300Y Intensive Prerequisite Hebrew
NMC 1302Y The Psalter
NMC 1304Y Biblical Narrative
NMC 1305Y Early Hebrew Epigraphy
NMC 1306H Scribes, Manuscripts, and Translations of the Hebrew Bible
NMC 1309H Wisdom in Ancient Israel
NMC 1310H The First Part of Isaiah
NMC 1311Y Post-Biblical Hebrew: Mishnah and Midrash
NMC 1312H Midrash Before the Rabbis: The Beginnings of Biblical Interpretation
NMC 1313H Mishnah and Tosefta
NMC 1314H Law in Ancient Judaism
NMC 1316H Modern Hebrew Poetry
Degree Programs

Near and Middle Eastern Civilizations

NMC 1317H Modern Hebrew Prose
NMC 1318H Midreshei Haalakha: Purity and Cultic Texts
NMC 1319H Midreshei Haalakha: Legal Texts and Narrative
NMC 1324Y Hebrew Legal Codes, Mediaeval and Modern
NMC 1326Y Topics in Midrashic Literature
NMC 1328H Intertextuality: Tannaitic and Amoraic Literature

History
NMC 2090Y Islamic History to the Fall of Baghdad
NMC 2140Y Political and Economic Development in the Arab World from the Tanzimat to 1914
NMC 2145Y Problems of Land Tenure and Tribal Society in the Arab World
NMC 2155Y The Emergence of Modern Iraq
NMC 2170H Topics in Modern Arab History I
NMC 2171H Topics in Modern Arab History II
NMC 2173H Intellectuals of the Modern Arab World
NMC 2180H Iranian Modernity
NMC 2225H History of Medieval Iran and Central Asia
NMC 2226H Readings in Medieval Persian Historical and Documentary Sources
NMC 2310Y Ottoman History to 1800
NMC 2315Y Seminar in Topics from Ottoman History

Islamic Art and Material Culture
NMC 2500H Early Islamic Art and Architecture
NMC 2501H Later Islamic Art and Architecture
NMC 2515Y The Islamic City
NMC 2520H Western Medieval Islamic Architecture
NMC 2521H The Taj Mahal and Its Origins: Medieval Islamic Architecture in Iran, Central Asia, and India
NMC 2526H Text and Image: The Formation of Arabic and Persian Manuscript Illustration
NMC 2527H Islamic Decorative Arts
NMC 2530Y Selected Problems in Islamic Art and Archaeology

Linguistics
NMC 1651H Phoenician and Punic Epigraphy
NMC 1652H Ugaritic
NMC 1653H Issues in Ancient Hebrew Philology
NMC 1654H Advanced Ancient Hebrew Grammar
NMC 1655H Comparative Semitics
NMC 1657H Issues in Ancient Hebrew Linguistics

Persian Studies
NMC 2035Y Women and Writing in Twentieth-Century Iran
NMC 2200Y Intensive Persian I
NMC 2201Y Intensive Persian II
NMC 2220Y Classical Persian Literature
NMC 2221H Medieval Persian Ethical and Advice Literature
NMC 2222H Persian Mystical Poetry
NMC 2223H The Masnavi of Rumi
NMC 2224H Persian Myths, Islamic Legends, and Mystical Allegories
NMC 2227H Topics on Zoroastrian Cosmology
NMC 2235Y Literature and Society in Twentieth-Century Iran
NMC 2335H Literature by Iranians in the Diaspora

Religion and Philosophy
NMC 1613Y Ancient Western Asiatic Religions (PhD students in Near and Middle Eastern Civilizations excluded)
NMC 1614Y Ancient Egyptian Religion (PhD students in Near and Middle Eastern Civilizations excluded)
NMC 2045Y Islamic Philosophical Texts
NMC 2050Y Islamic Theology and Philosophy
NMC 2052H Islamic Religious Thought
NMC 2053Y Images of the Prophet Muhammad
NMC 2055H The Qur’an and Its Interpretation
NMC 2056H Readings in Qur’an and Tafsir

Research Methodology
NMC 2010Y Bibliographical Problems of Islamic Research
NMC 2030Y Problems of Translation from Primary Sources
NMC 2080Y Theory and Method in Middle Eastern Studies

Sumerian
NMC 1701Y Sumerian Historical Texts

Turkish Studies
NMC 2300Y Intensive Turkish I
NMC 2301Y Intensive Turkish II
NMC 2330Y Readings in Ottoman Historical Texts
NMC 2331Y Ottoman Palaeography and Diplomatics
NMC 2340Y Studies in Ottoman and Turkish Literature
NMC 2345Y The Steppe Frontier in Islamic History

Other Courses
NMC 2000Y Directed Reading
NMC 2001Y Directed Reading and Research
RST 9999Y MA Thesis

Graduate Faculty

Full Members
Virginia Aksan - BA, MLS, MA, PhD
Paul-Alain Beaulieu - BA, LLB, MA, PhD (Associate Chair & Coordinator of Graduate Studies)
Michele Daviau - MA, PhD
Harry Fox - BA, BSc, MA, MS, PhD
Krzysztof Grzymski - MA, PhD
Sebastian Guenther - MA, PhD
Baruch Halpern - AB, MA, PhD
Amir Harrak - MA, PhD
Timothy Harrison - BA, MA, PhD
Amir Hassanpour - BA, MA, PhD
Paul Kingston - BA, MA, MPhil, DPhil

Near and Middle Eastern Civilizations 305
Degree Programs

Todd Lawson - BA, MA, PhD
Ronald Leprohon - BA, PhD
Tirzah Meacham - BA, MA, PhD
Sarianna Metso - MA, PhD
Hindy Najman - BA, MAPHD
Judith Newman - AB, MAR, PhD
Linda Northrup - BA, MA, PhD (Chair)
Victor Ostapchuk - BA, PhD
James Reilly - BA, MA, PhD
Karin Ruhrdanz - SCD, PhD
Walid Saleh - BA, MA, PhD
Maria Subtelny - BA, PhD
Mohamad Tavakoli-Targhi - BA, MA, PhD
Glen Taylor - BA, MTh, MPhil, PhD

Members Emeriti
Eleazar Birnbaum - BA, DipOAS
Libby Garshowitz - BA, MA, PhD
Lisa Golombek - MA, PhD
John Holladay, Jr. - BD, TD
Albertine Jwaideh - MA, BLitt, DPhil
Edward Keall - BA, PhD
R. Theodore Lutz - MA
Michael Marmura - MA, PhD, FRSC
Albert Pietersma - BA, BD, PhD
Rivanne Sandler - BA, MA, PhD
Roger Savory - MA, PhD
Ronald Sweet - BA, MA, PhD
John Wevers - BA, ThB, ThD, FRSC

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Sharon Green - BA, MA, PhD
Jens Hanssen - BA, MPhil, DPhil
Robert Holmstedt - BA, MA, PhD
Robert Mason - BA, PhD
Amira Mittermaier - MA, PhD
Mary-Ann Poul Wegner - BA, PhD
Enrico Raffaelli - PhD
Nursing Science  NUR

Faculty Affiliation
Nursing

Degree Programs Offered
Nursing Science – MN, Combined MHSc (Health Administration)/MN, PhD

Diploma Programs Offered
Nurse Practitioner - Post-Master's Nurse Practitioner (PMNP) Diploma

Collaborative Programs Offered
Degree programs that participate in:
1. Aboriginal Health, see p. 404
   Nursing Science, MN, PhD
2. Addiction Studies, see p. 406
   Nursing Science, MN, PhD
3. Aging, Palliative and Supportive Care Across the Life Course, see p. 408
   Nursing Science, MN/MHSc, PhD
4. Bioethics, see p. 416
   Nursing Science, MN, MN/MHSc, PhD
5. Cardiovascular Science, see p. 426
   Nursing Science, MN, PhD
6. Ethnic and Pluralism Studies, see p. 445
   Nursing Science, MN, PhD
7. Health Care, Technology and Place, see p. 454
   Nursing Science, PhD
8. Health Services and Policy Research, see p. 456
   Nursing Science, MN, PhD
9. Women and Gender Studies, see p. 473
   Nursing Science, MN, MN/MHSc, PhD
10. Women’s Health, see p. 478
    Nursing Science, MN, PhD

Overview
The Master of Nursing program prepares advanced nursing practitioners with specialized knowledge, skills, and expertise in a defined area of nursing to design programs and influence practice in that area. The program offers three fields of study:
1. Nursing administration
2. Clinical nursing
3. Acute care nurse practitioner
   i) Adult acute care
   ii) Child acute care

The Combined Master of Health Science (Health Administration)/Master of Nursing program provides an opportunity for students with a strong interest in both nursing and health administration to engage in an integrated and coherent program of study leading to the concurrent receipt of the MN and MHSc (Health Administration) degrees within 2.5 years of full-time study.

Contact and Address
Web: www.nursing.utoronto.ca
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Telephone: (416) 978-8727
Fax: (416) 978-8222
Graduate Department of Nursing Science
Suite 130, 155 College Street
Toronto, Ontario M5T 1P8
Canada

Degree Programs
Nursing Science

Master of Nursing

Minimum Admission Requirements
• Applicants must hold the BScN degree of the University of Toronto or an equivalent degree.
• Applicants must have obtained at least a mid-B standing in the final year of undergraduate study and, in addition, must have obtained at least B standing in the next-to-final year.
• Applicants seeking admission to the Acute Care Nurse Practitioner field must also have two years of clinical experience.
• For further information about admissions, please contact the Graduate Department of Nursing Science.

Program Requirements
• To qualify for the degree, a student shall complete a program of study outlined by the Graduate Department of Nursing Science.
• Students are strongly encouraged to enrol on a full-time basis; however, a part-time option is available on a limited enrolment basis. Part-time students must be enrolled at minimum in two out of three sessions in each academic year. The program will normally be completed within two years of full-time study. All requirements for the degree must be completed satisfactorily within six calendar years from the date of the student’s first enrolment in the program.
Combined Master of Health Science (Health Administration)/Master of Nursing

Minimum Admission Requirements
- Admission to the combined program is conditional upon independent admission to each of the participating graduate units. Applicants will normally be required to complete separate application forms on a concurrent basis and pay the application fees for admission to the MN Program and the MHSc (Health Administration) Program. Students must satisfy the full requirements for each of the participating graduate units.
- The aggregate criteria listed below must be satisfied to ensure that an application is considered complete for the purpose of entry into the Combined MHSc/MN Program in Health Administration and Nursing Science. Applicants must:
  o be accepted under the general regulations of the School of Graduate Studies. Meeting the minimum requirements does not guarantee admission.
  o hold a University of Toronto BSc degree in nursing with B+ standing or better in the last two years of undergraduate study, or its equivalent from a recognized university. The student is expected to have good academic standing in non-nursing as well as nursing subjects.
  o have successfully completed an introductory course in statistics prior to admission.
  o have at least three years of work experience in the health care field.

Program Requirements
- Year 1 - students enrol in the Faculty of Nursing and complete 4.0 required full-course equivalents (FCE) for the MN degree.
- Year 2 - students enrol in the Department of Health Policy, Management and Evaluation (HPME) and complete 5.5 FCE towards the MHSc (Health Administration) degree plus 1.0 elective FCE that can be taken from either degree program.
- Year 3 – 1.0 FCE taken in HPME.

Full-time PhD Option
- The program of study includes a minimum of five courses, including NUR 1081Y PhD Student/Faculty Seminars, and a thesis.
- In order to qualify for the degree, a student shall complete a program of study approved by the Graduate Department of Nursing Science. The student's program will be planned in consultation with a supervisory committee. It will be designed to support the student's research and to provide depth and breadth in the area of study.
- An examination of the dissertation proposal is required, usually in the second year and no later than August 31 of the third year, at the completion of the minimum course work requirements. The student's dissertation will be defended in the departmental oral examination and the final oral examination of the School of Graduate Studies.
- All requirements for the degree must be completed satisfactorily within six calendar years from the date of the student's first enrolment in the PhD program.

Flexible-time PhD Option
- Applicants must indicate on the application form their preference for the flexible-time option. The admission, course, and degree requirements for the flexible-time option are identical to those listed for the full-time PhD program.
- The dissertation proposal is usually examined in the third year and no later than the fourth year.
- All requirements for the degree must be completed satisfactorily within eight years from the date of the student's first enrolment in the PhD program.

Post-Master’s Nurse Practitioner Diploma

Minimum Admission Requirements
- 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.

Program Requirements
- The PMNP Diploma program requires 3.5 full-course equivalents (FCE) including two clinical courses and a clinical component. Course options focus on either acute care adult or acute care child.
- During the final two courses of the program, learners are engaged in clinical practice.
- The program can be completed in one year on a full-time basis or in 20 months on a part-time basis. Part-
Nursing Science

**Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR 1012H</td>
<td>Culture and Relations</td>
</tr>
<tr>
<td>NUR 1014H</td>
<td>The Politics of Aboriginal Health</td>
</tr>
<tr>
<td>NUR 1016H</td>
<td>Health Systems, Policy, and the Profession</td>
</tr>
<tr>
<td>NUR 1017H</td>
<td>History of Ideas in Nursing Practice</td>
</tr>
<tr>
<td>NUR 1021H</td>
<td>Nursing Ethics</td>
</tr>
<tr>
<td>NUR 1022H</td>
<td>Research Design, Appraisal, and Utilization</td>
</tr>
<tr>
<td>NUR 1023H</td>
<td>Critical Issues in the Design and Conduction of Controlled Trials of Behavioural Health Care Interventions (For Ph.D. students only. Prerequisite: Introductory graduate course in research design and biostatistics. For students planning an RCT for their thesis research.)</td>
</tr>
<tr>
<td>NUR 1024H</td>
<td>Foundations of Qualitative Inquiry</td>
</tr>
<tr>
<td>NUR 1025H</td>
<td>Doing Qualitative Research: Design and Data Collection</td>
</tr>
<tr>
<td>NUR 1026H</td>
<td>Evaluating Interventions in Clinical Settings (Prerequisites: Intermediate level statistics course (graduate level), basic knowledge of research design and methods, and advanced knowledge of statistical analyses.)</td>
</tr>
<tr>
<td>NUR 1028H</td>
<td>Introduction to Qualitative Research: Methodologies, Appraisal and Knowledge Translation</td>
</tr>
<tr>
<td>NUR 1031H</td>
<td>Technology and Place in Contemporary Health Care Work</td>
</tr>
<tr>
<td>NUR 1032H</td>
<td>Group Process and Professional Practice</td>
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<tr>
<td>NUR 1034H</td>
<td>Program Planning and Evaluation in Nursing</td>
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<tr>
<td>NUR 1035H</td>
<td>Public and Population Health Perspectives</td>
</tr>
<tr>
<td>NUR 1036H</td>
<td>Advanced Nursing Practice in Oncology</td>
</tr>
<tr>
<td>NUR 1037H</td>
<td>Aging and Place: Social and Policy Transitions</td>
</tr>
<tr>
<td>NUR 1039H</td>
<td>Women’s Health Across the Lifespan</td>
</tr>
<tr>
<td>NUR 1040H</td>
<td>Issues in Women’s Health Care</td>
</tr>
<tr>
<td>NUR 1041H</td>
<td>Caring for Children: Places, Programs and Caregivers</td>
</tr>
<tr>
<td>NUR 1042H</td>
<td>Responses of Children and Families to Illness in Childhood</td>
</tr>
<tr>
<td>NUR 1043H</td>
<td>Theories of Interpersonal Process</td>
</tr>
<tr>
<td>NUR 1044H</td>
<td>“Thinking” About Children: Implications for Health Care Research, Practice and Policy</td>
</tr>
<tr>
<td>NUR 1045H</td>
<td>Theories of Pain: Impact on the Individual, Family and Society</td>
</tr>
<tr>
<td>NUR 1046H</td>
<td>Persistent Illness: Theoretical, Research and Practice Implications</td>
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<tr>
<td>NUR 1047H</td>
<td>Community Participation and Health</td>
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<tr>
<td>NUR 1048H</td>
<td>Politics of Health in the Community</td>
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<tr>
<td>NUR 1049H</td>
<td>Nursing Approaches to Common Physiological and Behavioural Manifestations of Critically Ill Patients</td>
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<tr>
<td>NUR 1050H</td>
<td>Coping With Illness</td>
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<tr>
<td>NUR 1051H</td>
<td>Assessment and Management of Common Responses to Illness</td>
</tr>
<tr>
<td>NUR 1052H</td>
<td>Perinatal Nursing Sciences</td>
</tr>
<tr>
<td>NUR 1056H</td>
<td>Places, Programs, and People Who Provide Care</td>
</tr>
<tr>
<td>NUR 1057H</td>
<td>Interventions to Enhance Health, Abilities and Well-being</td>
</tr>
<tr>
<td>NUR 1058H</td>
<td>Aging, Gender and Equity</td>
</tr>
<tr>
<td>NUR 1059H</td>
<td>Informatics: Theory and Application in Nursing</td>
</tr>
<tr>
<td>NUR 1060H</td>
<td>Leadership and Management of Nursing and Health Services</td>
</tr>
<tr>
<td>NUR 1061H</td>
<td>Patient Information Systems/Workload Measurement</td>
</tr>
<tr>
<td>NUR 1062H</td>
<td>Measuring Nursing Care Effectiveness: Economic and Financial Perspectives</td>
</tr>
<tr>
<td>NUR 1064H</td>
<td>Behaviour in Health Care Organizations</td>
</tr>
<tr>
<td>NUR 1066H</td>
<td>Theoretical Basis for Methodology for Quality Improvement in Nursing Services</td>
</tr>
<tr>
<td>NUR 1067H</td>
<td>Recovery-Oriented Mental Health Systems of Care</td>
</tr>
<tr>
<td>NUR 1068H</td>
<td>Youth and Mental Health Promotion</td>
</tr>
<tr>
<td>NUR 1072Y</td>
<td>Advanced Nursing Practice Scholarship</td>
</tr>
<tr>
<td>NUR 1080H</td>
<td>Theoretical Perspectives in Nursing Science (Required course for Ph.D. students only)</td>
</tr>
<tr>
<td>NUR 1081Y</td>
<td>Ph.D. Student/Faculty Seminars</td>
</tr>
<tr>
<td>NUR 1082H</td>
<td>Knowledge Production in Nursing and Health</td>
</tr>
<tr>
<td>NUR 1083H</td>
<td>Comparative Politics of Health Policy in Globalizing World</td>
</tr>
<tr>
<td>NUR 1084H</td>
<td>Essentials in Applied Statistics in Nursing</td>
</tr>
<tr>
<td>NUR 1090H</td>
<td>Measuring Nursing Phenomena (Prerequisite: completion of an advanced graduate level statistics course)</td>
</tr>
<tr>
<td>NUR 1100Y</td>
<td>Pathophysiological Concepts and Therapeutics</td>
</tr>
<tr>
<td>NUR 1101H</td>
<td>Advanced Health Assessment and Clinical Reasoning (Adult) (Pre- or corequisite: NUR 1022H)</td>
</tr>
<tr>
<td>NUR 1102H</td>
<td>Advanced Health Assessment and Clinical Reasoning (Child) (Pre- or corequisite: NUR 1022H)</td>
</tr>
<tr>
<td>NUR 1109Y</td>
<td>Advanced Nursing Practice in Caring for Clients and Families I (Prerequisites: Successful completion of NUR 1017H, NUR 1022H, NUR 1101H or 1109H, NUR 1103H, and NUR 1104H)</td>
</tr>
<tr>
<td>NUR 1110Y</td>
<td>Advanced Nursing Practice in Caring for Clients and Families II (Credit/No Credit) (Prerequisite: NUR 1109Y, Pre- or corequisite: NUR 1034H)</td>
</tr>
</tbody>
</table>

**Joint Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>JNH 5001H</td>
<td>Health Care Settings, Site and Human Well Being</td>
</tr>
<tr>
<td>JNH 5002H</td>
<td>The Body, Health Care, Technology and Place</td>
</tr>
<tr>
<td>JPX 1001H</td>
<td>Parenting: Multidisciplinary Perspectives</td>
</tr>
</tbody>
</table>
Graduate Faculty

**Full Members**

- Janet Angus - RN, BScN, MScN, PhD
- Sylvain Baruchel
- Arlene Bierman - BA, MD, MS
- Beverley Chalmers - BA, MA, PhD
- Lisa Cicutto - BScN, MSc, PhD
- Paul Corey - BSc, MA, PhD
- Peter C Coyle - BA, MA, PhD
- Cindy-Lee Dennis - BScN, MScN, PhD
- Diane Doran - RN, BA, MHSc, PhD
- Adam Dubrowski - PhD
- Mary Jane Esplen - RN, BScN, MScN, PhD
- Martin Evans - BSc, MScTech, MIA, PhD
- Margaret Fitch - BN, MScN, PhD
- Denise Gastaldo - BScN, MA, PhD
- Paula Goering - RN, BSN, MSN, PhD
- Edith Hillan - RN, BScN, RM, MPhil, MSc, PhD
- Ellen Hodnett - BSN, MScN, PhD, Reisman Chair in Perinatal Nursing Research
- Dobis Howell - PhD
- Nazilla Khaniou - RN, BScN, MSc, PhD
- Young-In Kim - MD, FRCP(C)
- Gary Latham - BA, MS, PhD, FRSC
- Peggy Leatth - BScN, MHSA, PhD, Liberty Health Chair
- Lynn McDonald - BA, MSW, PhD
- Linda McGillis - RN, MSc, PhD
- Kathy McGilton - BScN, MScN, PhD
- Patricia McKeever - BN, MSc(A), PhD
- Kelly Metcalfe - BScN, PhD
- Carles Muntaner - MD, PhD
- Sioban Nelson - BA, PhD
- Linda-Lee O'Brien-Pallas - BScN, MScN, PhD, National Research Chair in Nursing Human Resources
- Elizabeth Peter-Hardtke - MSh, PhD (*Chair, Graduate Program & Associate Dean, Academic Programs*)
- Souraya Sidani - BSN, TD, MS, PhD
- Peter Singer - MD, MPH, FRCP(C)
- Bonnie Stevens - BScN, MScN, PhD, Signy Hildur Eaton Chair in Pediatric Nursing Research
- David Streiner - BA, MS, PhD, CPsych
- Ann Tourangeau - RN, BScN, MN, PhD
- Judith Watt-Watson - BScN, MSc, PhD
- David Zakus - BSc, MES, MSc, PhD

**Members Emeriti**

- Gail Donner - RN, BScN, MA, PhD, Order of Ontario
- Ruth Gallop - BScN, MScN, PhD
- William Harvey - BSc, BA, MA, PhD, LLB
- Dorothy Pringle - BScN, MS, PhD, Order of Canada

**Associate Members**

- Sherri Adams - BScN, MScN
- Gavin John Andrews - BA, PhD
- Heather Arthur - BScN, MScN, PhD
- Marilyn Ballantyne - RN, BScN, MScN, MHSc
- Kathy Bouts - BScN, MD
- Elizabeth Burcher - MScN
- Wilfrida Chavez - MHS

- Angela Cooper - PhD
- Dauna Crooks - BScN, MScN, DNSc
- Albina DiCenso - BScN, MSc, PhD
- James Drake - BSE, MBBCh, MSc, FRCS(C)
- Christine Duffield - BScN, MHP, PhD
- Carole Estabrooks - PhD
- Marcia Facey - PhD
- Mary Ferguson Pare - BScN, MPH, PhD
- Debra Fraser-Askim
- Susan Galloway - BScN, MScN
- Dianne Godkin - BScN, MN, PhD
- Catherine Hardie - RN, MSN, ED
- Lesleyanne Hawthorne - PhD
- Pam Hubley - RN, BScN, MScN
- Suzanne Jackson - BSc, MSc, PhD
- Christine Jonas-Simpson - BScN, MN, PhD
- Stephen Katz - BA, MA, PhD
- Karyn Kaufman - BSN, PhD
- Krista Keilty - MN
- Lori Korkola - MN
- Andre Williams Kushniruk - PhD
- Sara Lankshear - MAEd
- Heather Laschinger - RN, MAEd, PhD
- Ruth Lee - BScN, MScN, PhD
- Geraldine Macdonald - RN, BScN, ME, EdD
- Kathleen MacMillan - RN, BSc, MA, MSc
- Claire Mallette - BScN, MN, PhD
- Susan Matthews - BA, MHScN, DPH
- Elizabeth Mccay - PhD
- Michael Mcgillion - PhD
- Patrick McGrath - BA, MA, PhD
- Sandra Merklinger - BScN, MN, PhD
- Gail Mitchell - BScN, MScN, PhD
- Lynn Nagle - BNSc, MScN, PhD
- Caroline O'Grady - BScN, MN, PhD
- Kelly O'Halloran
- Janet Park Dorsay - RN, MN
- Pamela Pogue - RN, BAAN, MSc, ACNP
- Jessica Polzer - PhD
- Glenn Regehr - BA, PhD
- Sonia Sarkissian - BScN, MSc, PhD
- Kate Seers - PhD
- Judith Shamian - BA, MPH, PhD
- Tanya Deurvorst Smith - MN
- Brenda Stade - BScN, MN, PhD
- Jennifer Stinson - PhD
- Robyn Stremler - BSc, MSc, PhD
- Cynthia Struthers - MN
- Mary Lynn Stuckey - RN, BScN, MScN, ACNP
- Judith Tompkins
- Joan Tranmer - BScN, MSc, PhD
- Mandana Vaahabi - BScN, MNSc, PhD
- Karima Velji - PhD
- Leslie Vincent - BScN, MSc(A)
- Laura Wagner - MN, PhD
- Cheryl Lynn Williams - PhD
- Gail Wilson - RN, BScN, MScN
- Francine Wynn - BA, MA, PhD (*Coordinator of Graduate Studies*)
Nutritional Sciences  NFS

Faculty Affiliation
Medicine

Degree Programs Offered
Nutritional Sciences – MSc, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Aboriginal Health, see p. 404
   • Nutritional Sciences, MSc, PhD
2. Toxicology, Biomedical, see p. 421
   • Nutritional Sciences, MSc, PhD
3. Women’s Health, see p. 478
   • Nutritional Sciences, MSc, PhD

Overview
The Department of Nutritional Sciences offers advanced studies leading to the Master of Science and Doctor of Philosophy degrees in the basic science, clinical, and community aspects of human nutrition. Research projects range from the molecular to the community level of inquiry. Applicants with appropriate preparation in health sciences will be admitted under the general regulations of the School of Graduate Studies. Applicants interested in pursuing a Master of Health Science degree in the area of Community Nutrition or a Master of Science in Community Health degree in the area of Public Health Nutrition are advised to consult the calendar entry for the Department of Public Health Sciences for details.

Contact and Address
Web: www.utoronto.ca/nutrisci
E-mail: grad.nutrisci@utoronto.ca
Telephone: (416) 978-6071
Fax: (416) 978-5882

Department of Nutritional Sciences
Room 316, FitzGerald Building
150 College Street
University of Toronto
Toronto, Ontario  MSS 3E2
Canada

Degree Programs

Master of Science

Minimum Admission Requirements
• Applicants are admitted under the general regulations of the School of Graduate Studies. Students with diverse backgrounds are encouraged to apply.
• A standing in the final two years of a bachelor’s degree program or evidence of strong potential as a researcher.

Program Requirements
• Minimum program length for full-time students is 12 months. A limited number of students are admitted to the MSc program on a part-time basis.
• Students participate in NFS1204Y Master’s Seminars in Nutritional Sciences throughout their period of full-time registration and complete a minimum of two half-courses.
• 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.

Doctor of Philosophy

Minimum Admission Requirements
• Applicants may enter the PhD program in one of two ways:
  o Directly from a bachelor’s degree if their background is deemed appropriate and they have an A- or better average in their final two years.
  o With an appropriate MSc degree with at least an A- standing or evidence of strong potential as a researcher. Exceptional students may be allowed to reclassify into the PhD program after one year without completing the MSc on the recommendation of an advisory committee and successful completion of a reclassification examination.

Program Requirements
• The residence requirement for students admitted with a bachelor’s degree is three years; for students admitted with a master’s degree is two years.
• It is expected that students from either background can complete their PhD in a period of four years of full-time study, research, and thesis preparation; however, some students may require longer.
• Students participate in NFS 1304Y Doctoral Seminars in Nutritional Sciences.
Degree Programs

- Students entering with a bachelor's degree will also complete a minimum of six half-courses; those entering with an MSc degree, a minimum of four half-courses. The courses will be chosen by each student to provide an appropriate background for his or her area of investigation. It is expected that all students will have an adequate knowledge of research design and statistics through course work 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 comprehensive examination in nutritional sciences.
- Thesis.
- Student must pass the departmental examination before proceeding to the final oral examination.

Courses
Not all courses are offered every year. Please consult the Department regarding course offerings.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFS 1201H</td>
<td>Public Health Nutrition</td>
</tr>
<tr>
<td>NFS 1204H</td>
<td>Master's Seminars in Nutritional Sciences</td>
</tr>
<tr>
<td></td>
<td>(Credit/No Credit)</td>
</tr>
<tr>
<td>NFS 1208H</td>
<td>Field Observation and Nutrition Program Laboratory I</td>
</tr>
<tr>
<td>NFS 1209H</td>
<td>Field Observation and Nutrition Program Laboratory II (Credit/No Credit)</td>
</tr>
<tr>
<td>NFS 1210H</td>
<td>Field Observation and Program Laboratory III: Management of Community Food Programs</td>
</tr>
<tr>
<td>NFS 1211H</td>
<td>Community Nutrition</td>
</tr>
<tr>
<td>NFS 1212H</td>
<td>Regulation of Food Safety</td>
</tr>
<tr>
<td>NFS 1216H</td>
<td>Selected Topics Nutrition</td>
</tr>
<tr>
<td>NFS 1218H</td>
<td>Recent Advances in Nutritional Sciences I</td>
</tr>
<tr>
<td>NFS 1219H</td>
<td>Recent Advances in Nutritional Sciences II: Diet and Cancer</td>
</tr>
<tr>
<td>NFS 1220H</td>
<td>Clinical Nutrition</td>
</tr>
<tr>
<td>NFS 1221H</td>
<td>Nutrition Programs and Strategies</td>
</tr>
<tr>
<td>NFS 1222H</td>
<td>Recent Advances in Nutritional Sciences II: Diet and Cardiovascular</td>
</tr>
<tr>
<td>NFS 1223H</td>
<td>Dietary Carbohydrate and Glycaemic Index in Health and Disease</td>
</tr>
<tr>
<td>NFS 1224H</td>
<td>Nutritional Epidemiology</td>
</tr>
<tr>
<td>NFS 1301H</td>
<td>Directed Reading in Nutritional Sciences</td>
</tr>
<tr>
<td>NFS 1304H</td>
<td>Doctoral Seminars in Nutritional Sciences</td>
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<tr>
<td></td>
<td>(Credit/No Credit)</td>
</tr>
<tr>
<td>NFS 1484H</td>
<td>Advanced Nutrition</td>
</tr>
</tbody>
</table>

Courses which may continue over a program. The course is graded when completed.

Graduate Faculty

**Full Members**
- Johane Allard - MD, FRCP(C)
- Gerald Anderson - BSc, MSc, PhD
- Michael Archer - MA, MSc, PhD, DSc, Earle W McHenry Professor and Chair (Chair)
- Norman Boyd - MD, FRCP(C), The Lau Family Chair in Breast Cancer Research
- Ahmed El-Sohemy - BSc, MSc, PhD, Canada Research Chair
- Gail Eyssen - BSc, MSc, PhD
- Carol Greenwood - BSc, MSc, PhD
- Anthony Hanley - MSc, PhD (Graduate Coordinator, Admissions and Awards)
- David Ja Jenkins - BA, MB, BS, MA, MD, PhD, Canada Research Chair
- Young-In Kim - MD, FRCP(C)
- Nancy Kreiger - BA, MPH, MPhil, PhD
- Lawrence Alan Leiter - BSc, MD, FRCP(C)
- Ian Munro - BSc, MSc, PhD, FRCPPath
- Steven Narod - BSc, MD, FRCP(C)
- Deborah O’Connor - BASc, MSc, PhD
- Paul Pencharz - MB, ChB, PhD, FRCP(C)
- Daniel Sellen - BA, MA, PhD, CRC
- Valerie Tarasuk - BA, BEd, BASc, MSc, PhD
- Reinhold Vieth - BSc, MSc, PhD
- Vladimir Vukas - BSc, MSc, PhD
- Wendy Ward - BASc, MSc, PhD (Graduate Coordinator, Student Affairs)
- Thomas Wolever - BA, BM, BCh, MA, MSc, PhD, DM
- Stanley Zlotkin - BSc, MD, PhD, FRCP(C)

**Members Emeriti**
- George Beaton - MA, PhD
- Robert Bruce - BSc, MD, MSc, PhD, FRCP(C), FRSC
- Khursheed Jeejeebhoy - MB, PhD, MRCP, FRCP(C), FRCP(E)
- Maria Kronl - BSc, PhD
- A Venketeshwer Rao - BSc, MSc, PhD
- Lilian Thompson - BSc, MSc, PhD

**Associate Members**
- Ronald Ball - BSc, MSc, PhD, PAg
- Richard Bazinet - BSc, PhD
- Elena Cornelli - MSc, PhD
- Pauline Darling - BSc, MSc, PhD, RD
- Ann Fox - BAA, MHSc
- Robert Josse - MBBS, BSc, FACP, FRCP, FRCP(C)
- Mary Keith - BASc, PhD, RD
- Anthony Levitt - MBBS, DGo, FRCP(C)
- David Ma - BSc, PhD
- David Yeung - BA, MA, PhD
**Degree Programs**

**Occupational Science and Occupational Therapy OCT**

**Faculty Affiliation**
Medicine

**Degree Programs Offered**
Occupational Science and Occupational Therapy - MScOT

**Collaborative Programs Offered**
Degree programs that participate in:
1. Women’s Health, see p. 478
   • Occupational Science and Occupational Therapy, MScOT

**Overview**
The Master of Science in Occupational Therapy 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:
1. practice 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,
2. supervise rehabilitation assistants, OT aides, or other support workers,
3. use principles of research-based practice to guide and evaluate service delivery,
4. contribute to research that will advance the knowledge base of the discipline,
5. assume management roles,
6. take leadership roles in the profession,
7. take leadership roles in health care and other sectors including social services, education, and labour,
8. fill academic-practitioner positions, and
9. pursue doctoral studies and careers in academia or clinical research.

**Contact and Address**
Web: www.ot.utoronto.ca/
E-mail: occupational.therapy@utoronto.ca
Telephone: (416) 978-2765
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Department of Occupational Science and Occupational Therapy
University of Toronto
160-500 University Avenue
Toronto, Ontario M5G 1V7
Canada

**Degree Programs**

**Master of Science in Occupational Therapy**

**Minimum Admission Requirements**
• Four-year University of Toronto bachelor's degree, or its equivalent from a recognized university, with a minimum mid-B average in the final year. The department will review the last 10 full-course equivalents completed at the undergraduate level by the application deadline.
• Apply ONLINE using the Ontario Rehabilitation Sciences Programs Application Service (ORPAS) at <www.ouac.on.ca/orpas/>. Applications are accepted approximately mid-October each year.
• 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 facility. See Basic English Facility Requirements 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:
   o 600 on the paper-based test, accompanied by a minimum score of 5 on the Test of Written English
   o 250 on the computer-based test, accompanied by a minimum score of 5 on the Test of Written English
   o 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.

**Program Requirements**
• The MScOT is a two-year, 23-course program of continuous 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.
**Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCT 1100H</td>
<td>Applied Skills and Technology: Human Factors and Design in Occupational Therapy</td>
</tr>
<tr>
<td>OCT 1111Y</td>
<td>Occupational Science: Foundations for Occupational Therapy</td>
</tr>
<tr>
<td>OCT 1121H</td>
<td>Research Issues and Approaches in Occupational Therapy</td>
</tr>
<tr>
<td>OCT 1122H</td>
<td>Methods in Practice-Based Research</td>
</tr>
<tr>
<td>OCT 1131H</td>
<td>Occupational Therapy Practice I</td>
</tr>
<tr>
<td>OCT 1132H</td>
<td>Occupational Therapy Practice II</td>
</tr>
<tr>
<td>OCT 1133H</td>
<td>Occupational Therapy Practice III</td>
</tr>
<tr>
<td>OCT 1141H</td>
<td>Assessment in Occupational Therapy</td>
</tr>
<tr>
<td>OCT 1152Y</td>
<td>Musculoskeletal Structure and Function</td>
</tr>
<tr>
<td>OCT 1162Y</td>
<td>Psychosocial Perspectives in Occupational Therapy</td>
</tr>
<tr>
<td>OCT 1172Y+</td>
<td>Neuro-motor/Neuro-cognitive Perspectives in Occupational Therapy</td>
</tr>
<tr>
<td>OCT 1183Y</td>
<td>Occupational Therapy Fieldwork I</td>
</tr>
<tr>
<td>OCT 1190Y</td>
<td>Building Practice Through Mentorship</td>
</tr>
<tr>
<td>OCT 1220Y</td>
<td>Graduate Research Project</td>
</tr>
<tr>
<td>OCT 1251H</td>
<td>Enabling Occupation with Children: Part I</td>
</tr>
<tr>
<td>OCT 1252H</td>
<td>Enabling Occupation with Children: Part II</td>
</tr>
<tr>
<td>OCT 1256H</td>
<td>Enabling Occupation with Adults: Part I</td>
</tr>
<tr>
<td>OCT 1262Y</td>
<td>Enabling Occupation with Adults: Part II</td>
</tr>
<tr>
<td>OCT 1271H</td>
<td>Enabling Occupation with Older Adults: Part I</td>
</tr>
<tr>
<td>OCT 1272H</td>
<td>Enabling Occupation with Older Adults: Part II</td>
</tr>
<tr>
<td>OCT 1281Y</td>
<td>Occupational Therapy Fieldwork II</td>
</tr>
<tr>
<td>OCT 1282Y</td>
<td>Occupational Therapy Fieldwork III</td>
</tr>
<tr>
<td>OCT 1283Y</td>
<td>Occupational Therapy Fieldwork IV</td>
</tr>
</tbody>
</table>

**Graduate Faculty**

**Full Members**
- Anne Agur - BSc, MSc, PhD
- Heather Carnahan - BPE, MSc, PhD
- Anne Carswell - Dip(OT), BSc, MSc, PhD
- Angela Colantonio - BA, BSc, MHS, PhD
- Deirdre Dawson - BSc, MSc, PhD
- Sharon Frielfeld - BSc(OT), MA, PhD
- Michael Iwama - BSc, BSc(OT), MSc, PhD
- Bonnie Kirsh - BSc(OT), MEd, PhD
- Alex Mihailidis - BASc, MASC, PhD, PEng
- Helene Polatajko-Howell - BOT, MEd, PhD, OT(C) *(Chair)*
- Susan Rappolt - BSc(OT), MSc, PhD
- Denise Reid - BSc(OT), MEd, PhD
- Rebecca Renwick - DIP (P&OT), BA, PhD

**Members Emeriti**
- Judith Friedland - BA, Dip(P&OT), MA, PhD

**Associate Members**
- Donna Barker - BSc(OT), MSc
- Dorcas Beaton - BSc(OT), MSc, PhD
- Debra Cameron - BSc(OT), MEd, PhD
- Jill Cameron - BSc, MSc, PhD
- Kent Campbell - BSc, PhD
- Lynn Cockburn - BComm, BSc(OT), MEd, MPH
- Susan Farrow - BA, BSc(OT)
- Anne Fourn - BSc(OT), MEd
- Debbie Hert - BSc(OT), MScKin
- Michelle Keightley - BSc, MA, PhD
- Sylvia Langlois - BHSc(OT), MSc
- Patricia Mckee - Dip(OT), BSc(OT), MSc
- Patty Riggby - Dip(OT), MHSc
- Barbara Secker - BA, MA, PhD
- Rachel Stack - BSc, MCiSc
- Jill Stier - BM(OT), MA *(Coordinator of Graduate Studies)*
- Barry Trentham - BSc(OT), MES

*Courses which may continue over a program. The course is graded when completed.
+Extended course. For academic reasons, course work is extended into session following academic session in which course is offered.
Pharmaceutical Sciences  PHM

Faculty Affiliation
Pharmacy

Degree Programs Offered
Pharmaceutical Sciences – MSc, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Addiction Studies, see p. 406
   Pharmaceutical Sciences, MSc, PhD
2. Aging, Palliative and Supportive Care Across the Life Course, see p. 408
   Pharmaceutical Sciences, MSc, PhD
3. Biomedical Engineering, see p. 418
   Pharmaceutical Sciences MSc, PhD
4. Cardiovascular Sciences, see p. 426
   Pharmaceutical Science, MSc, PhD
5. Global Health, see p. 452
   Pharmaceutical Sciences, PhD
6. Health Care, Technology and Place, see p. 454
   Pharmaceutical Sciences, PhD
7. Health Services and Policy Research, see p. 456
   Pharmaceutical Sciences, MSc, PhD
8. Neuroscience, see p. 466
   Pharmaceutical Sciences, MSc, PhD
9. Toxicology, Biomedical, see p. 421
   Pharmaceutical Sciences, MSc, PhD

Overview
The Department of Pharmaceutical Sciences offers graduate programs leading to the Master of Science and Doctor of Philosophy degrees. The Department offers research opportunities and courses in three principal areas:
1. Molecular Pharmacology and Toxicology: drug receptor interactions, molecular biology, electrophysiology, biochemistry, clinical, adverse drug reactions, and drug metabolism
2. Pharmaceutics and Pharmacokinetics: pharmaceutical and medicinal chemistry, pharmaceutical formulations, radiopharmaceutical synthesis, drug discovery, biophysical chemistry, basic pharmacokinetics and clinical research
3. Clinical, Social and Administrative Pharmaceutical Sciences: clinical and pharmacy practice, sociology of health, social psychology, health policy, and health economics

Contact and Address
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E-mail: pharm.sci@utoronto.ca
Telephone: (416) 978-2179
Fax: (416) 978-8511

Degree Programs
Master of Science

Minimum Admission Requirements
Full-Time MSc
- Four-year University of Toronto BSc degree or its equivalent 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 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 TWE
  - computer-based TOEFL: 250 and 5 on the essay rating component.
  - 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 U.S. university, the applicant must write and achieve scores at the 50th percentile ranking or better on the Graduate Record Examination (GRE—General Test).

Part-Time MSc
- A limited number of students will be admitted to the MSc program on a part-time basis. All admission requirements are the same as for the full-time MSc.

Program Requirements
Full-Time MSc
- 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.
- The student normally completes two full-course equivalents (FCE), but a minimum of one FCE is required.
- Yearly advisory committee meetings.
- One poster presentation given to all faculty and graduate students at Graduate Research in

Graduate Department of Pharmaceutical Sciences
Leslie Dan Faculty of Pharmacy
University of Toronto
144 College Street
Toronto, Ontario M5S 3M2
Canada
Degree Programs

Pharmaceutical Sciences

Under exceptional circumstances, students may be
Students who have a high academic standing and
A letter of support from the employer.
Applicants must meet all the admission require
hold a university appointment in Canada at an
The Pharmaceutical Sciences Graduate Admissions
are members in good standing of a regulated
Students are required to be on campus and partici
A program of study that provides the appropriate
paper-based TOEFL: 600 and 5 on the TWE

Part-Time MSc

All requirements are the same as for the MSc full-
except part-time students are re-
quired to attend at least four departmental seminars in
each academic year.
A 20-30 minute oral presentation of own research
work is given every other year during enrolment.

Doctor of Philosophy

Minimum Admission Requirements

Full-Time PhD

Appropriate University of Toronto MSc degree, or its
equivalent from a recognized university, with a mini-
umum overall B+ average.
Under exceptional circumstances, students may be
admitted directly to the PhD program with a four-
year BSc degree or its equivalent. Factors consid-
ered include academic standing, ability to conduct
research, and availability of financial support from the
potential supervisor.
The Pharmaceutical Sciences Graduate Admissions
Committee considers the applicant’s background and accomplishments, academic standing, and fi-
nancial support from the potential supervisor.
Applicants whose primary language is not English
and who graduated from a university where the lan-
guage 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 TWE
  computer-based TOEFL: 250 and 5 on the es-
say rating component.
  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 U.S. university, the ap-
plicant 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.

Transfer from MSc to PhD

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 one FCE with
an average grade of A minus and have financial
support.
A transfer from the MSc program to the PhD pro-
gram occurs normally within 15 months of the stu-
dent's first registration in the MSc program.

Flexible-Time PhD

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 require-
ments for entry to the full-time PhD program in
Pharmaceutical Sciences.
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, and
  hold a university appointment in Canada at an
  academic standard equivalent to the University
  of Toronto Lecturer.

Program Requirements

Full-Time PhD

A program of study that provides the appropriate
foundation for thesis research. The program de-
dpends on the student’s background and is planned
in consultation with the supervisor and advisory
committee, with the approval of the graduate chair.
Students normally complete 2.0 FCEs. Students ad-
mitted directly to the PhD program with a BSc must
complete 3.0 FCEs.
Yearly advisory committee meetings.
A qualifying examination.
Two short research presentations to all faculty
and graduate students at Graduate Research in
Progress (GRIP), an exit full-length research semi-
nar to be given before the thesis defence, and at-
tendance at GRIP and Post-GRIP.
Regular attendance at Pharmaceutical Sciences
departmental seminars.
In addition to the departmental exit seminar held
within three months of the final thesis defence, all
PhD students are required to give an oral research
presentation of approximately 20-30 minutes every
year after the first 12 months of registration in the
program.
A thesis in conformity with the University regula-
tions, based on research conducted while registered
in a PhD program at the University of Toronto.
Students are required to be on campus and partici-
pating full-time (including summer) until all program
requirements are completed. Simultaneous regis-
tration in another full-time degree program is not

316 Pharmaceutical Sciences
Transfer from MSc to PhD

- 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.

Flexible-Time PhD

- The program requirements for the flexible-time PhD option are identical to the requirements for the full-time PhD program.
- The time limit for completion of the flexible-time PhD program option from first registration in the program is eight years for students with a master's degree and nine years for students with a bachelor's degree. Students must ensure that they have adequate time on campus to attend classes and to fulfill the academic requirements.
- Full-time registration is required for the first four years for those entering the program with a master's degree; five years for those with a bachelor's degree. Thereafter, students may register part-time.

Courses

Please consult the Department's timetable for courses offered in a given year.

PHM 1107H Advanced Pharmacokinetics Course I
PHM 1108H Advanced Pharmacokinetics Course II
PHM 1109H Recent Developments in Dosage Form Design (prerequisite PHM 224Y or equivalent)
PHM 1110H Chemical Basis of Drug Metabolism
PHM 1111H Research and Statistical Analytical Methods
PHM 1114H Special Topics in Radiopharmaceuticals I
PHM 1115H Special Topics in Radiopharmaceuticals II
PHM 1116H Pharmacoeconomic Evaluation
PHM 1117H DNA-Drug Interactions
PHM 1118H Drug Utilization: Patterns, Outcomes, and Issues in Drug Use Evaluation
PHM 1120H Selected Research Topics in the Pharmaceutical Sciences
PHM 1122H Fundamentals of Drug Discovery
PHM 1123H Thermodynamics of Macromolecular Interactions
PHM 1124H The Power and Politics of Global Pharmaceutical Policy
PHM 1125H Complementary/Alternative Medicine: Health Systems and Policy Issues
PHM 1126H The Economics of Health and Health Care
JFK 1120H Selected Topics in Drug Development I
JFK 1121H Selected Topics in Drug Development II
JFK 1122H Drug Transport Across Biological Membranes
JNP 1014Y Interdisciplinary Toxicology
JNP 1016H Graduate Seminar in Toxicology
JNP 1017H Molecular and Biochemical Basis of Toxicology
JNP 1018H Current Topics in Molecular and Biochemical Toxicology
JRY 1124H Structure-Based Drug Design

Graduate Faculty

Full Members
Christine Allen - BSc; PhD
Zubin Austin - BScPhm, MBA, MIS, MEd, PhD
Peri Ballantyne - BA, MA, PhD
Reina Bendayan - BScPharm, PharmD (Associate Dean, Graduate Education)
Heather Boon - BScPhm, PhD
Barry Bowen - BScPhm, MScPhm
Usanda Busto - PharmD
Tigran Chalikian - BS, MS, PhD
Yu-Ling Cheng - SB, SM, PhD
Jillian Cohen-Kohler - BA, MA, PhD
Thomas Einason - BScPhm, MEd, MPharm, MSc, PhD
Jean Gariepy - BSc, PhD
Guri Giaever - BS, PhD
Denis Grant - BSc, PhD
Paul Grootendorst - BA, MA, PhD
David Hampson - BS, MS, PhD (Coordinator of Graduate Studies)
Heiko Heerklotz - PhD
Jeffrey Henderson - BA, PhD
K Wayne Hindmarsh - BScPhm, MSc, PhD, FCSFS
Anne Holbrook - MD, BScPhm, PharmD, MSc
Shinya Ito - MD, ABCP
Shana Kelley - BA, PhD
Gideon Koren - MD, FRCP(C)
Lakhsmi Kotra - BPhm, PhD
Murray Krahm - BA, MSc, MD, FRCP(C)
Ping Lee - BS, PhD
Robert Macgregor - BS, PhD
Linda MacKeigan - BScPhm, PhD
Linda Muzzin - BA, MA, MA, PhD
K Sandy Pang - BScPhm, PhD
Peter Pennefather - BSc, PhD
Micheline Piquette-Miller - BScPhm, PhD
Raymond Reilly - BScPhm, MScPharm, PhD
Bradley Saville - BSc, PhD, PEng
Michael Spino - BScPharm, PharmD
Beth Sproule - BScPhm, PharmD
Linda Taddio - BScPhm, MSc, PhD
Jack Uetrecht - BS, MS, MD, PhD, Canada Research Chair
Scott Walker - BScPhm, MScPharm
James Wells - BScPhm, MSc, PhD
Peter Wells - BScPhm, PharmD
Xiao Yu Wu - BSc, MScEng, PhD

*Extended course. For academic reasons, course work is extended into session following academic session in which course is offered.*

Pharmaceutical Sciences 317
Degree Programs

Members Emeriti
Joan Marshman - BScPhm, MSc, PhD
John Nairn - PhD
Peter John O’Brien - BSc, MSc, PhD
Harold Segal - BScPhm, MS, PhD

Associate Members
Stephane Angers - BSc, PhD
Jana Bajcar - BScPhm, MScPharm
Ian Crandall - BSc, MSc, PhD
Carolyn Cummins - PhD, BSc
Brian Hardy - BScPhm, PharmD
Emmanuel Papadimitroupoulos - BSc, BSP, MScPharm, PhD
Alison Thompson - BA, MA, PhD
Pharmacology and Toxicology  PCL

Faculty Affiliation
Medicine

Degree Programs Offered
Pharmacology – MSc, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Addition Studies, see p. 406 Pharmacology, MSc, PhD
2. Cardiovascular Sciences, see p. 426 Pharmacology, MSc, PhD
3. Neuroscience, see p. 466 Pharmacology, MSc, PhD
4. Toxicology, Biomedical, see p. 421 Pharmacology, MSc, PhD
5. Women's Health, see p. 478 Pharmacology, MSc, PhD

Overview
The Department of Pharmacology and Toxicology offers graduate programs leading to the degrees of Master of Science and Doctor of Philosophy in Pharmacology. Research activity, from which graduate students may choose problems for their theses, include:
- 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

All MSc and PhD students are expected to undertake self-directed study and to demonstrate proficiency in pharmacological principles throughout the course of their graduate program.

Contact and Address:
Web: www.pharmtox.utoronto.ca/
E-mail: pharmtox.dept@utoronto.ca
Telephone: (416) 978-5244
Fax: (416) 978-6395

Department of Pharmacology and Toxicology
Room 4207, Medical Sciences Building
University of Toronto
Toronto, Ontario M5S 1A8
Canada

Degree Programs

Master of Science

Minimum Admission Requirements
- Appropriate four-year University of Toronto bachelor’s degree, or its equivalent from a recognized university, with a minimum B+ average in the final year of the undergraduate program.
- Applicants are normally required to have taken courses in physiology, biochemistry, or allied sciences sufficient to form a foundation for their work in pharmacology.
- 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.

Program Requirements
- 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.
- PCL 1002Y Graduate Pharmacology. The academic program may require additional coursework.
- 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.

Doctor of Philosophy

Minimum Admission Requirements
- Appropriate University of Toronto MSc degree, or its equivalent from a recognized university, with a minimum B+ average in master’s courses
- Applicants are normally required to have taken courses in physiology, biochemistry, or allied 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.
- Well qualified students with excellent research potential holding an appropriate bachelor’s degree may be considered for direct admission to the PhD program. These applicants must have achieved a minimum final year average of A-.
• Applicants 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.

• 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.

• All successful applicants are responsible for obtaining research supervision and financial support before they are permitted to officially register in their program.

Program Requirements

• 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.

• PCL 1002Y Graduate Pharmacology (major subject), PCL 1003Y Seminars in Pharmacology (Credit/No Credit course), 1.0 additional FCE (minor subject), and any other courses advised by the Graduate Education Committee. The student's advisory committee should help the student determine the minor course.

• Pharmacology graduate faculty members also offer a variety of laboratory-based and tutorial-based learning modules to provide breadth to the student's training experience beyond their particular areas of research focus. During their program, PhD students are required to choose five breadth modules from among available options, at least one of which must be a laboratory module and one a tutorial module. 0.5 FCE from outside the student's research area may substitute for one of the five breadth modules. The student's advisory committee will assist the student in choosing suitable modules.

• As part of the course requirement for PCL 1003Y 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 departmental 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.

• PhD students in other departments who desire to take a minor in pharmacology will be permitted to take one of the listed courses depending on their previous training and space availability in the course.

Courses

The Department should be consulted each session as to course offerings. Students may also find up-to-date course information on the departmental Web site: www.pharmtox.utoronto.ca/programs/grad/courses.htm.

PCL 1001Y Systems Pharmacology
PCL 1002Y Graduate Pharmacology
PCL 1003Y* Seminars in Pharmacology (Credit/No Credit)
PCL 1004Y Clinical Pharmacology
PCL 1012H Cognitive Neuropharmacology
PCL 1015H Applied Pharmacogenetics and Pharmacogenomics
JFK 1120H Selected Topics in Drug Development I
JFK 1121H Selected Topics in Drug Development II
JFK 1122H Drug Transport Across Biological Membranes
JNP 1014Y Interdisciplinary Toxicology
JNP 1016H Graduate Seminar in Toxicology
JNP 1017H+ Molecular and Biochemical Basis of Toxicology
JNP 1018H+ Current Topics in Molecular and Biochemical Toxicology
JNR 1444Y Fundamentals of Neuroscience: Cellular and Molecular
JPM 1005Y Behavioural Pharmacology
JPY 1007Y Neuropharmacology of Neurotransmitter Receptors
JYG 1555H Topics in Cellular and Molecular Neurobiology

Graduate Faculty

Full Members
Usanda Busto - PharmD
Paul Dorian - MSc, MDCH
Susan George - MD, FRCPC
Denis Grant - BSc, PhD (Chair)
Larry Grupp - DSc
David Hampson - BS, MS, PhD
Patricia Harper - BSc, MSc, PhD
Shinya Ito - MD, ABCP
Stephen John Kish - PhD
Gideon Koren - MD, FRCP(C)
Krista Lancot - PhD
Dzung Le - MSc, PhD
Peter Pun Li - PhD
John MacDonald - BSc, PhD
Norton Milgram - BA, MA, PhD
Jane Mitchell - PhD
Malcolm Moore - MD
Claudio Naranjo - MD
Jose Nobrega - BA, MA, PhD
Brian O'dowd - PhD
K Sandy Pang - BScPhm, PhD
John Parker - MD
Peter Pennefather - BSc, PhD
Arturas Petronis - MD, PhD

* Courses which may continue over a program. The course is graded when completed.
+ Extended course. For academic reasons, course work is extended into session following academic session in which course is offered.
Drug Programs

Micheline Piquette-Miller - BScPhm, PhD
David Riddick - BSc, PhD (Coordinator of Graduate Studies)
Bernard Schimmer - BS, PhD
John Wesley Semple - PhD
Neil Shear - BA, MD, FRCP(C)
Carter Snead III - MD
Denise Tomkins - BSc, PhD
Rachel Tyndale - PhD
Jack Uetrecht - BS, MS, MD, PhD, Canada Research Chair
Jerry Warsh - MD, PhD
James Wells - BScPhm, MSc, PhD
Peter Wells - BScPhm, PharmD
Albert Wong - MD, PhD

Members Emeriti
Willets Burnham - BA, PhD
Laszlo Endrenyi - PhD
Gerald Joseph Goldenberg - MD
Johannes Heersche - BSc, PhD
Tadanobu Inaba - BEng, MSc, PhD
Dezso Kadar - BSc, MSc, PhD
Harold Kalant - MD, PhD
Peter John O’Brien - BSc, MSc, PhD
Allan Okey - BSc, MSc, PhD
Cecil Pace-Asciak - PhD
Philip Seeman - BSc, MSc, MDCH, PhD
Edward Sellers - MD, PhD, FRCP(C)

Associate Members
Rebecca Laposa - PhD
Bernard Le Foll - MD, PhD
Jason Matthews - PhD
J. Peter McPherson - BSc, MSc, PhD
Hee-Won Park - MSc, PhD
Cindy Woodland - BSc, MSc, PhD
Martin Zack - PhD
Degree Programs

Philosophy  PHL

Faculty Affiliation
Arts and Science

Degree Programs Offered
Philosophy - MA, PhD, Combined JD/PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Ancient and Medieval Philosophy, see p. 411 Philosophy, PhD
2. Bioethics, see p. 416 Philosophy, MA, PhD
3. Editing Medieval Texts, see p. 437 Philosophy, PhD
4. Environmental Studies, see p. 443 Philosophy, MA, PhD
5. Jewish Studies, see p. 460 Philosophy, PhD
6. Women and Gender Studies, see p. 473 Philosophy, MA, PhD

Overview
The Department of Philosophy offers two degree programs - Master of Arts and Doctor of Philosophy - as well as a combined program - Combined Juris Doctor/Doctor of Philosophy program - which enables students to pursue work at the intersection of philosophy and law and to complete both the PhD and the Juris Doctor programs in a shorter time than it would take to complete the degrees separately.

Applicants should consult the department's Graduate Bulletin for complete details of graduate programs, course offerings, and short academic profiles of the graduate faculty. The Graduate Bulletin is available online at philosophy.utoronto.ca/graduate/courses.html.

Contact and Address
Web: philosophy.utoronto.ca
E-mail: phildept@chass.utoronto.ca
Telephone: (416) 978-3312
Fax: (416) 978-8703

Department of Philosophy
Jackman Humanities Building (JHB)
170 St. George Street
University of Toronto
Toronto, Ontario  M5R 2M8
Canada

Degree Programs

Master of Arts

Minimum Admission Requirements
- Students are admitted under the general regulations of the School of Graduate Studies. Admission requires a four-year University of Toronto bachelor's degree, or its equivalent from a recognized university, that includes at least 6.0 full-course equivalents (FCE) in philosophy, with an average grade of at least a mid-B in the applicant's overall program and of at least an A- in the applicant's philosophy courses.
- Applicants must submit the following supporting documents with their applications:
  o One official transcript of the applicant's academic record from each university attended, complete to the time of application.
  o A statement of about 300 words, indicating the applicant's areas of interest in philosophy at the graduate level.
  o Two letters of reference from philosophy instructors, written on the appropriate forms.
  o One sample of the applicant's written work in philosophy (written in English or French); e.g., a term paper, not exceeding 20 pages. It should be as recent as possible and should provide evidence of ability to study philosophy at an advanced level.
  o 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:
    o Paper-based TOEFL exam: 600 and 5 on the TWE
    o Computer-based TOEFL exam: 250 and 5 on the essay rating component
    o 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 facility are acceptable.
- PhD applicants are strongly encouraged (but are not required) to submit the results of the Graduate Record Exam (GRE) taken within the preceding 18 months.

Program Requirements
- The program consists of a minimum of 4.0 full-course equivalents (FCE) in philosophy. At least 1.0 FCE must be in the history of philosophy and at least 1.0 FCE must be in the problems of philosophy.
- 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 stu-
Minimum Admission Requirements

- Students approved by the department are admitted under the general regulations of the School of Graduate Studies via one of two routes:
  - From a bachelor’s degree. A four-year University of Toronto bachelor’s degree, or its equivalent from a recognized university, that includes at least 6.0 full-course equivalents (FCE) in philosophy, 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 philosophy courses.
  - From a master’s degree. A University of Toronto master’s degree in philosophy, or its equivalent from a recognized university, with an average grade of at least an A- in the applicant’s overall program.

- Applicants must submit the following supporting documents with their applications:
  - One official transcript of the applicant’s academic record from each university attended, complete to the time of application.
  - A statement of about 300 words, indicating the applicant’s areas of interest in philosophy at the graduate level.
  - Two letters of reference from philosophy instructors, written on the appropriate forms.
  - One sample of the applicant’s written work in philosophy (written in English or French); e.g., a term paper not exceeding 20 pages. It should be as recent as possible and should provide evidence of the student’s capability to study 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 TWE
    - Computer-based TOEFL exam: 250 and 5 on the essay rating component
    - Internet-based TOEFL exam: 100/120 and 22/30 on the writing and speaking sections. Equivalent results in some other recognized tests of English-language facility are acceptable.

- Students who wish to take 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 for both the MA and PhD programs.

- 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 Graduate Coordinator.

- PhD applicants are strongly encouraged (but are not required) to submit the results of the Graduate Record Exam (GRE) taken within the preceding 18 months.

Program Requirements

PhD students pursue a program of study and research approved by the department. The minimum requirements follow:

- Course Requirements.
  - Students with a four-year bachelor’s degree must take a minimum of 6.0 FCE in philosophy, with an average grade of at least an A-. At least 1.0 FCE must be in the history of philosophy and at least 1.0 FCE must be in the problems of philosophy. Students who fail to maintain an average of at least an A- after completing 3.0 FCE may have their registration terminated.
  - Students with a master’s degree must take a minimum of 3.0 FCE in philosophy, with a minimum A- average. At least 1.0 FCE must be in the history of philosophy and at least 1.0 FCE must be in the problems of philosophy. A student whose MA degree does not exhibit sufficient breadth, in particular, does not include the equivalent of at least 1.0 FCE in the history of philosophy and at least 1.0 FCE in the problems of philosophy, may be required to take additional courses.

- All students must complete the proseminar in philosophy (PHL 1111H) during the fall session of their first year. This will count as 0.5 FCE toward the number of requisite courses.

- With the department’s permission, a student may replace up to 1.0 FCE in philosophy with a graduate course offered by another department.

- A doctoral student is required to complete at least 3.0 FCE by the end of the first year of registration and to complete any of the remaining degree course requirements by the end of the second year.

- Breadth Requirement. A student must demonstrate competence in at least six areas of philosophy: three of the five specified areas in the history of philosophy and no more than two consecutively (ancient, medieval, 17th-18th century, 19th century, and 20th century), and in each of three areas in problems of philosophy: metaphysics, epistemology and philosophy of science, values (ethics, politics, aesthetics, and philosophy of religion), and mind, language and logic.

- Area Requirement. Before proceeding with formal research on a thesis topic, the student must demonstrate competence in a broader area within which that topic falls. For further information see Information for Doctoral Students, available from the Graduate Office.

- Language Requirement. A student must demonstrate a reading knowledge of French; however, with
the permission of the department, another language (other than English) may be substituted for French, provided that this other language is required in carrying out the approved research area. The student's area committee may require competence in additional languages deemed necessary for the student's proposed area of research.

- **Thesis.** A candidate must submit a thesis on an approved subject and defend the thesis at a 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 fulfill the course, breadth, area, 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.

### Combined Juris Doctor/Doctor of Philosophy Program

#### Minimum Admission Requirements
- Entry to the program requires admission to both the PhD program in philosophy and the JD program in law. Separate applications are required.

#### Program Requirements
- For details, visit the Faculty of Law's Web site at www.law.utoronto.ca/prosp_stdn_content.asp?itemPath=3/6/15/0/0&contentId=190
- Year 1 - students complete the first year of the law curriculum.
- Year 2 - students complete the remaining requirements for the JD degree and begin course work required for the PhD. Note that some of the courses completed in fulfillment of PhD requirements will be counted for credit toward the JD and vice versa.
- By the end of Year 4, in the case of someone admitted on the basis of a master's degree, otherwise by the end of Year 5, a student should have completed any remaining course requirements for the PhD degree, satisfied the breadth requirement, and met the area requirement. The candidate then begins work on the thesis.
- During Years 1 and 2, students are registered as full-time law students; subsequently, they are registered as full-time doctoral students and are eligible for graduate funding.

### Courses

Not all courses are offered every year. Please consult the department's *Graduate Bulletin*, 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 Course for Ph.D. Students**
- PHL 1111H Proseminar

**Reading Courses**
- PHL 1000H,Y Reading Course
- PHL 1001H,Y Reading Course
- PHL 1500H,Y Reading Course

### History of Philosophy

#### Ancient Philosophy
- PHL 2000H Early Greek Philosophy
- PHL 2002H Plato
- PHL 2003H Aristotle
- PHL 2005H Seminar in Plato
- PHL 2007H Seminar in Aristotle
- PHL 2009H Seminar in Greek Philosophy
- PHL 2010H Late Greek Philosophy

#### Eastern Philosophy
- PHL 2015H Confucianism
- PHL 2016H Taoism: Philosophy and Religion
- PHL 2017H Buddhism in China

#### Medieval Philosophy
- PHL 2020H Augustine
- PHL 2030H Aquinas
- PHL 2032H Seminar in Aquinas
- PHL 2040H Medieval Philosophy
- PHL 2041H Seminar in Medieval Philosophy
- PHL 2042H Topics in Medieval Philosophy
- PHL 2045H Late Medieval Philosophy

#### Early Modern Philosophy
- PHL 2050H Descartes
- PHL 2051H The Rationalists
- PHL 2054H Hume
- PHL 2055H The Empiricists
- PHL 2057H Seminar in Seventeenth-Eighteenth Century Philosophy
- PHL 2062H Kant's *Critique of Pure Reason*
- PHL 2063H Kant's *Ethics*
- PHL 2064H Seminar in Kant

#### Nineteenth- and Twentieth-Century Philosophy
- PHL 2076H Hegel
- PHL 2078H Kierkegaard
- PHL 2079H Marxist Philosophy
- PHL 2084H Seminar in Nineteenth-Century Continental Philosophy
- PHL 2085H Husserl
- PHL 2088H Heidegger
- PHL 2089H Seminar in Twentieth-Century Continental Philosophy
Degree Programs

**Philosophy**

**Degree Programs**

**Philosophy**

**Philosophy of Science**

JPH 2192H Philosophy of Science

JPH 2194H Topics in the History of the Philosophy of Science

PRL 2195H Philosophy of Biology

PRL 2196H Topics in the Philosophy of Science

PRL 2199H Seminar in the Philosophy of Science

**Problems of Philosophy**

**Metaphysics and Epistemology**

PHL 2100H Metaphysics

PHL 2101H Seminar in Metaphysics

PHL 2105H Topics in Metaphysics

PHL 2110H Epistemology

PHL 2111H Seminar in Epistemology

PHL 2115H Topics in Epistemology

PHL 2119H Philosophical Foundations of Multidisciplinary Studies

PHL 2171H Philosophy of Mind

PHL 2172H Seminar in Philosophy of Mind

PHL 2174H Fried's Philosophy of Mind

PHL 2181H Philosophy of Religion

PHL 2182H Seminar in Philosophy of Religion

**Logic and the Philosophy of Language**

PHL 2120H Introductory Mathematical Logic

PHL 2122H Advanced Logic

PHL 2124H Seminar in Logic

PHL 2125H Many Valued and Modal Logics

PHL 2126H Philosophy of Logic

PHL 2127H Philosophy of Mathematics

PHL 2128H Decision and Game Theory

PHL 2130H Topics in Informal Logic

PHL 2190H Philosophy of Language

PHL 2191H Seminar in the Philosophy of Language

PHL 2197H Foundations of Computation and Information

**Value Theory**

PHL 2131H Ethics

PHL 2132H Seminar in Ethics

PHL 2133H Topics in Ethics

PHL 2135H Metaethics

PHL 2141H Political Philosophy

PHL 2142H Seminar in Political Philosophy

PHL 2143H Social Philosophy

PHL 2144H Seminar in Social Philosophy

PHL 2145H Bioethics

PHL 2146H Topics in Bioethics

JVP 2147H Environmental Philosophy

PHL 2148H Philosophy of Law

JPL 2149H Legal Theory

PHL 2151H Aesthetics

PHL 2152H Philosophy and Teaching

**Feminist Philosophy**

JPW 2118H Philosophical Foundations of Women's Studies

PHL 2140H Feminist Philosophy

**Philosophy of Science**

JPH 2192H Philosophy of Science

JPH 2194H Topics in the History of the Philosophy of Science

PRL 2195H Philosophy of Biology

PRL 2196H Topics in the Philosophy of Science

PRL 2199H Seminar in the Philosophy of Science

**Miscellaneous**

PRL 3000H Professional Workshop

PHL 3101H Intensive Special Course

PHL 4900H Research Seminar

**Graduate Faculty**

**Full Members**

Donald Ainslie - BSc, MA, PhD (Chair)

Derek Allen - BA, BPhil, MA, DPhil

Rachel Barney - BA, PhD, Canada Research Chair

Joseph Berkovitz - BSc, MA, PhD

Deborah Black - BA, MA, PhD

Joseph Boyle - BA, PhD

James Brown - BA, MA, PhD

Anjan Chakravartty - BSc, MA, MPhil, PhD

Philip Clark - BA, PhD

Rebecca Comay - BA, MA, PhD

Frank Cunningham - BA, MA, PhD, FRSC

David Dyzenhaus - BA, LLB, DPhil, FRSC

Paul Franks - BA, MA, PhD

Lloyd Gerson - BA, MA, PhD

Robert Gibbs - BA, MA, PhD

Willi Goetschel - LicPhil, PhD

Paul William Gooch - BA, MA, PhD

Joseph Heath - BA, MA, PhD

Thomas Hurka - BA, BPhil, DPhil, FRSC

Douglas Hutchinson - BA, BPhil, DPhil

Brad Inwood - BA, MA, PhD, FRSC, Canada Research Chair

Bernard Katz - BA, MA, PhD

Peter King - AB, PhD

Mark Kingwell - BA, MLitt, PhD

Philip Kremer - BSc, PhD (Coordinator of Graduate Studies)

Lynda Lange - BA, MA, PhD

Martin Lin - BA, PhD

Peter Ludlow - BA, PhD

Mohan Matthen - BSc, MA, PhD, Canada Research Chair

Cheryl Misak - BA, MA, DPhil, FRSC

Kathryn Morgan - BA, MA, MEd, PhD

Margaret Morrison - BA, MA, PhD

Amy Mullin - BA, PhD

Jennifer Nagel - BA, MA, PhD

David Novak - AB, MHL, rabbinical diploma, PhD

Diana Raffman - BA, PhD

Arthur S Ripstein - BA, MA, PhD, MSL

Marleen Rozemond - BA, PhD

William Edward Seager - BA, MA, PhD
Degree Programs

Sonia Sedivy - BA, PhD
Vincent Tsing-song Shen - BA, MA, PhD, Lee Chair
Brian Cantwell Smith - BS, MS, PhD, Canada Research Chair
Gopal Sreenivasan - BA, BPhil, PhD, Canada Research Chair
Ingrid Stefanovic - BA, MA, PhD
L Wayne Sumner - BA, MA, PhD, FRSC, University Professor
Sergio Tenenbaum - BA, MA, PhD
Evan Thompson - AB, MA, PhD
Paul Thompson - BA, MA, PhD
Denis Walsh - BSc, PhD, BA, MPhil, PhD, Canada Research Chair
Jennifer Whiting - BA, MA, PhD
Byeong-Uk Yi - BA, MA, MA, PhD

Members Emeriti
John Canfield - BA, AM, PhD
Ronald De Sousa - BA, PhD, FRSC
Daniel Goldstick - BA, BPhil, DPhil
Andre Gombay - BA, MA, BPhil
Ian Hacking - BA, MA, PhD, FRSC, OC, University Professor
Jordan Sobel - MA, PhD
Alasdair Urquhart - MA, PhD

Associate Members
Imogen Dickie - BA, BPhil, DPhil
Jennifer Hawkins - BA, MA, PhD
Benjamin Hellie - BA, PhD
Stephanie Sophia Moreau - BA, BPhil, PhD, JD
Martin Pickave - BA, MA, PhD
Gurpreet Rattan - BSc, MA, PhD
Jonathan Weisberg - BA, PhD
Jessica Marie Wilson - BA, PhD
Physical Therapy  PHT

Faculty Affiliation
Medicine

Degree Programs Offered
Physical Therapy – MScPT

Overview
The Master of Science in Physical Therapy (MScPT) is a 24-month professional program leading to entry to practice. The program is accredited by the Accreditation Council for Canadian Physiotherapy Academic Program. Graduates will be eligible to write the Physiotherapy Competency Examination of the Canadian Alliance of Physiotherapy Regulatory Boards, which qualifies them to practice physical therapy in Canada. Graduates will be eligible to register in the Canadian Physiotherapy Association and the Colleges of Physiotherapy in all Canadian provinces. The MScPT program is also accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association, enabling graduates to apply for licensure in the United States.

The Master of Science in Physical Therapy, Advanced Standing Option is a professional graduate degree program that allows eligible physical therapists with a BScPT from a Canadian university to acquire the entry-to-practice master’s degree on a part-time basis in an online, e-learning environment with two on-campus residencies. There is a strong focus on research and best practices integrated throughout the one-year program. Students complete a group research project during this one-year program.

Contact and Address
Web: www.physicaltherapy.utoronto.ca
E-mail: physther.facmed@utoronto.ca
Telephone: (416) 978-2765
Fax: (416) 946-8562

Department of Physical Therapy
c/o Centre for Function and Well-Being
Rehabilitation Sciences Building
Room 160, 500 University Avenue
Toronto, Ontario  M5G 1V7
Canada

Degree Programs

Master of Science in Physical Therapy

Minimum Admission Requirements
24-month Program
• Applicants to the 24-month MScPT program are considered if they hold a four-year University of Toronto bachelor’s degree, or its equivalent from a recognized university, with a minimum mid-B average in the final year.
• Prerequisite courses including human vertebrate physiology (1.0 full-course equivalent (FCE)), life and/or physical science (1.0 FCE), social sciences, humanities or languages (1.0 FCE); and statistics or research methods (0.5 FCE). Refer to the departmental Web site www.physicaltherapy.utoronto.ca for a full listing of admission requirements.
• Facility 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 TOEFL, with minimum scores of:
  o Paper-based test: 600 with 5 on the TWE and 50 on the TSE.
  o Computer-based test; 250 with 5 on the essay rating component and 50 on the TSE.
  o Internet-based test: 100/120 and 22/30 on the writing and speaking sections.

Advanced Standing Option
• Applicants to the 12-month MScPT Advanced Standing Option will be considered if they have completed a four-year undergraduate BScPT degree program in Canada (or Quebec equivalent) with a minimum mid-B average.

Program Requirements

24-month Program
• Students normally complete all requirements within 24 months.
• Participate in 12 units that includes lectures, seminars, tutorials, laboratories, case-based learning, structured clinical sessions, structured independent study units, and clinical internships. Research principles and practices are integrated into the curriculum. Students are required to complete all units.
• Complete a group research project.
• Demonstrate proficiency in key areas of professional practice, including research practice, prior to graduation.

Advanced Standing
• Complete the program on a part-time basis in an online, e-learning environment with two on-campus residencies. There is a strong focus on research and best practices integrated throughout the program.
• Complete a group research project.
• Complete the program in 12-months.

Courses

PHT 1001H Introduction to Professional Physical Therapy Practice, Evaluation and Research
PHT 1002Y Cardiorespiratory and Exercise Physical Therapy Practice
### Degree Programs

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Instructor(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHT 1003Y</td>
<td>Musculoskeletal Physical Therapy Practice</td>
<td>Stephanie Nixon - BHSc(PT), BA, MSc, PhD</td>
</tr>
<tr>
<td>PHT 1004Y</td>
<td>Clinical Internship—Cardiorespiratory</td>
<td>Ethne Nussbaum - BSc(PT), MEd, PhD</td>
</tr>
<tr>
<td></td>
<td>(Honours/Pass/Fail)</td>
<td>Kelly O'Brien - BSc, BSc(PT)</td>
</tr>
<tr>
<td>PHT 1005Y</td>
<td>Neurological Physical Therapy Practice</td>
<td>Jo-Anne Piccinin - BSc(PT), MSc</td>
</tr>
<tr>
<td>PHT 1006Y</td>
<td>Research and Program Evaluation for Physical Therapy Practice I</td>
<td>Nancy Salbach - BSc(PT), MSc, PhD</td>
</tr>
<tr>
<td>PHT 1007Y</td>
<td>Clinical Internship—Neuroscience</td>
<td>Sharon Switzer-McIntyre - BPE, BSc(PT), MEd, PhD</td>
</tr>
<tr>
<td></td>
<td>(Honours/Pass/Fail)</td>
<td>(Vice-Chair, Education)</td>
</tr>
<tr>
<td>PHT 1008Y+</td>
<td>Advanced Neuromusculoskeletal Physical Therapy Practice</td>
<td>Ada Tang - BSc(PT), MSc</td>
</tr>
<tr>
<td>PHT 1009Y+</td>
<td>Clinical Internship—Musculoskeletal II</td>
<td>Virginia Wright - PhD</td>
</tr>
<tr>
<td></td>
<td>(Honours/Pass/Fail)</td>
<td>Euson Yeung - BSc(PT), MEd</td>
</tr>
<tr>
<td>PHT 1010Y</td>
<td>Research and Program Evaluation for Physical Therapy Practice II</td>
<td>Nancy Young - BSc(PT), MSc, PhD (Adjunct)</td>
</tr>
<tr>
<td></td>
<td>(Honours/Pass/Fail)</td>
<td>Karl Zabjek - BSc, MSc, PhD</td>
</tr>
<tr>
<td>PHT 1011Y</td>
<td>Clinical Internship—Selective</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Honours/Pass/Fail)</td>
<td></td>
</tr>
<tr>
<td>PHT 1012Y</td>
<td>Research and Program Evaluation for Physical Therapy Practice III</td>
<td></td>
</tr>
<tr>
<td>PHT 1013H+</td>
<td>Professional Practice Issues in Physical Therapy (Credit/No Credit)</td>
<td>(Advanced Standing Option only)</td>
</tr>
<tr>
<td>PHT 1014Y</td>
<td>Clinical Internship—Musculoskeletal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Honours/Pass/Fail)</td>
<td></td>
</tr>
</tbody>
</table>

### Selective Course

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Instructor(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHT 1015Y</td>
<td>Clinical Internship—Physical Therapy Practice (Honours/Pass/Fail)</td>
<td>(PHT 1015Y may replace any one of PHT 1004Y, PHT 1007Y, PHT 1009Y, PHT 1011Y, and PHT 1014Y)</td>
</tr>
</tbody>
</table>

### Graduate Faculty

#### Full Members

- Katherine Berg - BPT, BScPT, MSc, PhD *(Chair)*
- Dina Brooks - BSc(PT), MSc, PhD
- Cheryl Cott - Dip(PT), BPT, DipGer, MSc, PhD
- Aileen Davis - BSc(PT), MSc, PhD
- Susan Jaglal - BSc, MSc, PhD *(Vice-Chair, Research)*
- William McIlroy - BSc, MSc, PhD (Adjunct)
- Mary (Molly) Verrier - DipP&OT, MHSc
- Karen Yoshida - BPhE, BSc(PT), MSc, PhD

#### Associate Members

- Robyn Davies - Dip(PT), BHSc(PT), MSc(PT)
- Cindy Ellerton - BSc(PT), MSc
- Catherine Evans - BSc(PT), MSc, PhD *(Coordinator of Graduate Studies)*
- Barbara Gibson - BMR(PT), MSc, PhD
- Chantal Graveline - BSc(PT), MSc, PhD
- Joanne Howe - Dip(P&OT), BSc(PT)
- Judith Hunter - BPT, MSc, PhD
- Clifford Klein - BA, MA, PhD
- Michel Landry - BSc(PT), MSc(PT), PhD
- Brenda Mori - BSc(PT), MSc

*Extended course. For academic reasons, course work is extended into session following academic session in which course is offered.*
Degree Programs

Physics  PHY

Faculty Affiliation
Arts and Science

Degree Programs Offered
Physics – MSc, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Astrophysics, see p. 415
   • Physics, MSc
2. Biomedical Engineering, see p. 418
   • Physics, MSc, PhD
3. Geology and Physics, see p. 450
   • Physics, MSc, PhD

Overview
The Department of Physics offers graduate programs leading to the Master of Science and the Doctor of Philosophy degrees. The department carries out research in experimental and theoretical physics in the following fields: atmospheric physics, geophysics, quantum optics and condensed matter physics, subatomic physics, and biophysics. The department has close ties with the Canadian Institute for Theoretical Astrophysics. This association enables our students to work and consult with leading theorists who are appointed to, or who are visiting, CITA.

Students are accepted under the general regulations. The department provides financial support for one year of the MSc and four years of the PhD program.

Contact and Address
Web: www.physics.utoronto.ca
E-mail: grad@physics.utoronto.ca
Telephone: (416) 978-2945
Fax: (416) 978-1547

Department of Physics
Room 315, McLennan Physical Labs
University of Toronto
Toronto, Ontario M5S 1A7
Canada

Degree Programs

Master of Science

Minimum Admission Requirements
• An appropriate four-year bachelor’s degree with a final year average of at least mid-B from the University of Toronto, or its equivalent.
• Proof of English language facility for applicants whose first language is not English.

Program Requirements
Students normally complete program requirements in one of three ways:
• Option 1: Course Work plus MSc Research Report
  o Complete 5.0 full-course equivalents (FCE) including: 3.0 FCE graduate lecture courses, 1.0 FCE 6000-series research course appropriate to field of specialization, and PHY 3400Y (MSc Research Report) course.
• Option 2: Course Work plus MSc Research Project
  o Complete 5.0 Full Credit Equivalents (FCE) including: 2.0 FCE graduate lecture courses, 1.0 FCE 6000-series research course appropriate to field of specialization, 1.0 FCE 7000-series seminar course and PHY 3400Y (MSc Research Project) course.
• Option 3: Course Work + MSc Research Thesis
  o Complete 6.0 full course equivalents (FCE) including: 2 FCE graduate lecture courses, 1 FCE 6000-series research course appropriate to field of specialization, 1 FCE 7000-series seminar course, PHY 3400Y (MSc Research Report) course, and PHY 9999Y (Thesis Course). Please note students are expected to complete these requirements within six sessions (two years) of initial registration. Departmental financial support is only provided for the first year. Students following this stream will not normally be considered for PhD admission.
• All MSc students are expected to attend the weekly general colloquium conducted by the department.
• The MSc program is full time.

Doctor of Philosophy

Minimum Admission Requirements
• An appropriate University of Toronto master’s degree or its equivalent, with an average of at least B+ or demonstrated comparable research competence.
• Proof of English facility for applicants whose first language is not English.
• Outstanding applicants may be considered directly from undergraduate programs. Normally, these applicants will have an undergraduate average of A or higher.

Program Requirements
Students can normally complete program requirements in one of two ways:
• Option 1: Entry from MSc:
  o Complete 4.0 FCE graduate lecture courses and a thesis. Course credit will normally be given toward 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 FCE graduate lecture courses.
Degree Programs

- Complete a qualifying oral examination within 8 months of starting the PhD program.

**Option 2: Direct Entry from Undergraduate Studies**

**First Year Requirements:**
- Complete 2.0 FCE graduate lecture courses, 1.0 FCE 6000-series research course appropriate to field of specialization, and a research progress report.
- Direct-entry students must maintain a B+ average in order to continue. A student who commences a direct-entry PhD will normally not be permitted to re-register in the MSc program.

**Upper Year Requirements:**
- Complete an additional 2.0 FCE graduate lecture courses and a thesis.
- All PhD students are expected to attend the weekly general colloquium conducted by the department.
- The PhD program is full time.

**Courses**

*All courses are not given every year. Please check the departmental brochure or Web site for course availability.*

**Introductory Courses**
- PHY 1406H Microprocessor Interfacing Techniques
- PHY 1460H Nonlinear Physics
- PHY 1483H Relativity Theory I
- PHY 1484H Relativity Theory II
- PHY 1485H Advanced Classical Optics
- PHY 1487H Quantum Theory of Solids I
- PHY 1489H Introduction to High Energy Physics
- PHY 1491H Current Interpretations of Quantum Mechanics
- PHY 1492H Physics of the Earth
- PHY 1493H Geophysical Imaging I
- PHY 1494H Geophysical Imaging II
- PHY 1496H Experimental Applied Geophysics
- PHY 1498H Introduction to Atmospheric Physics
- PHY 2205H Special Topics in Quantum Optics I
- PHY 2206H Special Topics in Quantum Optics II
- PHY 2207H Physics of Photonic Crystals
- PHY 2208H Nonlinear Optics
- PHY 2209H Linear and Nonlinear Optics II
- PHY 2211H Quantum Information Theory
- PHY 2301H Structure and Dynamics of Condensed Matter
- PHY 2303H Quantum Theory of Solids II
- PHY 2313H Special Topics in Condensed Matter Physics I
- PHY 2314H Special Topics in Condensed Matter Physics II
- PHY 2315H Advanced Statistical Mechanics
- PHY 2321H Many Body Physics I
- PHY 2322H Many Body Physics II
- PHY 2401H Cosmology and Black Holes
- PHY 2403H Quantum Field Theory I
- PHY 2404H Quantum Field Theory II
- PHY 2405H Experimental High Energy Physics
- PHY 2406H Special Topics in Particle Physics I
- PHY 2407H Special Topics in Particle Physics II
- PHY 2408H Phenomenology of the Standard Model
- PHY 2502H Climate System Dynamics
- PHY 2504H Advanced Atmospheric Dynamics
- PHY 2505H Atmospheric Radiative Transfer and Remote Sounding
- PHY 2506H Data Assimilation and Retrieval Theory
- PHY 2509H Special Topics in Atmospheric Physics I
- PHY 2510H Special Topics in Atmospheric Physics II
- PHY 2601H Special Topics in Geophysics I
- PHY 2602H Special Topics in Geophysics II
- PHY 2603H Inverse Theory
- PHY 2605H Exploration Seismology
- PHY 2606H Global Geophysics
- PHY 2607H Advanced Electromagnetic Methods in Geophysics
- PHY 2608H Elastic and Inelastic Waves in Inhomogeneous Media I
- PHY 2609H Planetary Physics
- PHY 2701H Biological Physics
- JGP 4170H Geotectonics

**Report Course for MSc Students**
- PHY 3400Y+ Selected Topics in Physics

**Seminar Courses**
- PHY 7001Y+ Atmospheric Physics Seminar
- PHY 7002Y+ Biophysics/Medical Physics Seminar
- PHY 7003Y+ Condensed Matter and Statistical Physics Seminar
- PHY 7004Y+ Geophysics Seminar
- PHY 7005Y+ Quantum Optics Seminar
- PHY 7007Y+ Particle Physics and Relativity Seminar

*+Extended course. For academic reasons, course work is extended into session following academic session in which course is offered.*
Degrees Programs

Research Courses
PHY 6011Y Research in Atmospheric Physics
PHY 6021Y Research in Biophysics and Medical Physics
PHY 6031Y Research in Condensed Matter and Statistical Physics
PHY 6041Y Research in Geophysics
PHY 6051Y Research in Quantum Optics
PHY 6071Y Research in Particle Physics and Relativity

Graduate Faculty

Full Members
Jonathan Abbatt - BSc, AM, PhD
David Bailey - BSc, PhD
Richard Bailey - BSc, PhD
Virginijus Barzda - BSc, MSc, PhD
J Richard Bond - BSc, MS, PhD, FRS, FRSC, OC, Fellow CIAR, Fellow APS, University Professor
Kin-Yip Chun - BASc, MA, PhD
Richard Code - BSc, AM, PhD
Rashmikant Desai - BSc, PhD
Al-Amin Dhiri - BSc, MSc, PhD
D. James Donaldson - BSc, PhD
James Drummond - BA, MA, DPhil
Charles Dyer - BSc, MSc, PhD
Richard Edwards - BSc, PhD, ARCS
Claudiu Gradinaru - BSc, PhD
P Allan Griffin - BSc, MSc, PhD
Bob Holdom - BSc, MA, PhD
Kentaro Hori - BSc, MSc, PhD
Daniel James - BA, PhD
Sajeev John - PhD, University Professor, Canada Research Chair
Dylan Jones - BA, MSc, PhD
Michael Joy - BSc, MSc, PhD, PEng
Stephen Julian - BSc, MSc, PhD
Hae-Young Kee - BS, MS, PhD, Canada Research Chair
Anthony Key - MA, DPhil
Yong Baek Kim - BSc, PhD, Canada Research Chair
Young-June Kim - BSc, PhD
Lev Kofman - MSc, PhD, Fellow CIAR
Peter Krieger - BSc, MSc, PhD
Paul Kushner - BSc, MSc, PhD
Hoi-Kwong Lo - BA, MS, PhD, Canada Research Chair
Julian Lowman - BSc, MSc, PhD
Michael Luke - PhD (Chair)
George Luste - BA, PhD
Robin Marjoribanks - BSc, MSc, MSc, PhD
John Martin - PhD
Bernd Milkerel - Diplom, Dr rer nat
R J Dwayne Miller - BSc, PhD, FRSC, Canada Research Chair
Jerry Mitrovica - BSc, MSc, PhD
David McMillen - BSc, MSc, PhD
GW Kent Moore - BSc, PhD
Stephen Morris - BSc, MSc, PhD
Norman Murray - BSc, PhD, Canada Research Chair
C. Barth Netterfield - BSc, PhD, Fellow CIFAR
Robert Orr - BSc, PhD, ARCS
Arun Paramekanti - Bach of Tech, PhD
Amanda Peet - BSc, PhD
W Richard Peltier - BSc, MSc, PhD, FRSC, University Professor
Ue-Li Pen - BSc, MSc, PhD
Erich Poppitz - BSc, PhD
Russell Pysklywec - BSc, PhD
Joseph Repka - BSc, PhD
Pierre Savard - BSc, MSc, PhD
Theodore Shepherd - BSc, PhD (Coordinator of Graduate Studies)
Pekka Sinervo - BSc, PhD
John Sipe - BSc, MSc, PhD
Sabine Stanley - BSc Hon, PhD
Aephraim Steinberg - PhD
Kimberly Strong - BSc, DPhil
Richard Teuscher - BSc, MSc, PhD
Christopher Thompson - BS, PhD
Joseph Thywissen - BS, MA, PhD
William Trischuk - BSc, PhD
Henry Van Driel - BSc, MSc, PhD, FRSC
Kaley Walker - PhD, BSc
John Wei - BA, MS, PhD
Mathew Wells - BSc, PhD

Members Emeriti
Han Cho - BSc, MSc, PhD
Thomas Drake - BSc, MSc, PhD
David Dunlop - MA, PhD
Allan Jacobs - BASc, MSc, PhD
Martin Lee - BA, MA, PhD
Albert Litherland - BSc, PhD, FRSC, FRS, University Professor Emeritus
Robert Logan - BSc, PhD
Albert May - BA, MSc, PhD
Patrick O'Donnell - BSc, PhD
John Perz - BASc, MSc, PhD
David Rowe - BA, MA, DPhil, FRSC
Michael Walker - BEng, DPhil
Gordon West - BASc, MA, PhD
Samuel Wong - BA, MS, PhD

Associate Members
David McMillen - BSc, MSc, PhD
Degree Programs

Physiology  PSL

Faculty Affiliation
Medicine

Degree Programs Offered
Physiology  – MSc, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Biomedical Engineering, see p. 418
   • Physiology, MSc, PhD
2. Cardiovascular Sciences, see p. 426
   • Physiology, MSc, PhD
3. Developmental Biology, see p. 433
   • Physiology, PhD
4. Neuroscience, see p. 466
   • Physiology, MSc, PhD

Overview
The Department of Physiology offers graduate programs leading to the Master of Science and Doctor of Philosophy degrees. 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; tonic channels and synaptic transmission; excitability, ultrastructure and plasticity of the brain.

Contact and Address
Web: www.uofphysiology.com
E-mail: graduate.physiology@utoronto.ca
Telephone: (416) 978-2601
Fax: (416) 978-4940

Address:
Department of Physiology
Room 3217, Medical Sciences Building
University of Toronto
Toronto, Ontario M5S 1A8
Canada

Degree Programs

Master of Science

Minimum Admission Requirements
• Admission is based on academic record, an essay summarizing background strengths and scientific aims, and at least two confidential letters of reference.
• Minimum standing of at least B+ in the final year of a University of Toronto 20-credit bachelor’s degree, or its equivalent from a recognized university, with courses such as biochemistry, calculus, organic and physical chemistry, general physics, and physiology.
• We encourage physical science stream students from undergraduate programs in physics, mathematics, engineering, and other sciences 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 facility in the English language through the successful completion of the Test of English as a Foreign Language (TOEFL) with the following minimum scores:
  o Paper-based TOEFL: 600 and 5 on the TWE
  o Computer-based TOEFL: 250 and 5 on the essay rating component
  o Internet-based TOEFL: 100/120 and 22/30 on the writing and speaking sections
Other English proficiency tests are acceptable. Please consult the Web site for departmental standards.

Program Requirements
• 1 full-course equivalent (FCE) in Physiology graduate-only courses. Courses are selected in consultation with the supervisor and/or advisory committee. See the Physiology Web site for details of course requirements.
• Attend the departmental seminar series.
• Present and defend a research thesis acceptable to the graduate department.
• After 12 to 18 months in the MSc program, students will do one of the following:
  o write and defend a MSc thesis and graduate
  o write and defend a thesis and go on to the PhD program
  o 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

Doctor of Philosophy

Minimum Admission Requirements
• Admission is based on academic record, an essay summarizing background strengths and scientific aims, and at least two confidential letters of reference.
• Students may be admitted via one of the following routes:
o after completion of the MSc degree program or its equivalent with at least B+ standing from a recognized university
o through transfer from the MSc program

• Applicants should have taken courses such as 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 facility in the English language through the successful completion of the Test of English as a Foreign Language (TOEFL) with the following minimum scores:
  • Paper-based TOEFL: 600 and 5 on the TWE
  • Computer-based TOEFL: 250 and 5 on the essay rating component
  • Internet-based TOEFL: 100/120 and 22/30 on the writing and speaking sections

Other English proficiency tests are acceptable. Please consult the Web site for departmental standards.

Program Requirements

• 2.0 full course equivalents (FCE) in Physiology graduate-only courses. 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. Students transferring from MSc in Physiology are required to complete 1.0 FCE since these students will have already fulfilled 1.0 FCE in the MSc.
• PSL 1066H PhD Research Grant Proposal is a mandatory course and counts as 0.5 FCE. This course requires a written proposal and oral defence of the student's research program over the ensuing three years. See the Physiology Web site for details of course requirements.
• Attendance at and contribution to the departmental seminar program is an important part of graduate education and is a requirement of the program.
• 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.

Courses

Not all courses are offered each year. Check departmental Web site for course availability and course requirements.

JCV 1060H Developmental Cardiovascular Physiology
JCV 3060H Advanced Topics in Cardiovascular Sciences—Molecular Biology and Heart Signal Transduction

JCV 3061H Advanced Topics in Cardiovascular Sciences—Hormones
JCV 3062H Advanced Research in Cardiovascular Sciences—Heart Function
JCV 3063H Advanced Research in Cardiovascular Sciences—Vascular
JYG 1555H Advanced Topics: Cellular and Molecular Neuroscience

PSL 1024H Advanced Topics: Endocrinology and Neuroendocrinology
PSL 1026H Advanced Topics: Experimental Cell Physiology
PSL 1034H Advanced Topics: Metabolic Disorders
PSL 1036H Advanced Topics: Respiration
PSL 1047H Advanced Topics: Somatosensory and Pain Neuroscience
PSL 1053H Advanced Topics: Critical Assessment of Ion Channel Function
PSL 1066H Research Grant Proposal (Credit/No Credit)
PSL 1067H Advanced Topics: Advances and Techniques in Developmental Physiology
PSL 1068H Advanced Topics: Molecular Basis of Behaviour
PSL 1069H Advanced Topics: Respiratory Physiology
PSL 1070H Advanced Topics: Hormone Action
PSL 1480H Advanced Topics: Investigative Developmental Physiology

Joint Graduate/Undergraduate

JNR 1444Y Fundamentals of Neuroscience: Cellular and Molecular
JNS 1000Y Fundamentals of Neuroscience: Systems and Behaviour
PSL 1052H Fundamentals of Ion Channel Function
PSL 1054H Physiological Instrumentation and Electronics
PSL 1061H Reproductive Physiology
PSL 1421H Pregnancy and Birth: From Implantation to Newborn
PSL 1425H Integrative Metabolism and Its Endocrine Regulation
PSL 1432H Theoretical Physiology
PSL 1460H Molecular Physiology
PSL 1462H Molecular Aspects of Cardiovascular Function
PSL 1472H Sleep Physiology and Chronobiology
PSL 1497H Scientific Communication

Courses which may continue over a program. The course is graded when completed.
Degree Programs

Graduate Faculty

**Full Members**
Susan Adamson - BSc, MSc, PhD
Gerald Anderson - BSc, MSc, PhD
Peter Backx - BSc, MSc, PhD, DVM
Christine Bear - BSc, MSc, PhD
Jaques Belik - MD
Denise Belsham - PhD, Canada Research Chair
Alan Bocking - MD, FRCS(C)
Rudy Boonstra - BSc, PhD
Theodore Brown - BSc, PhD
Patricia Brubaker - BSc, PhD, Canada Research Chair
Isabella Caniggia - MD, PhD
Peter Carlen - MD, FRCP(C)
Robert Casper - MD, FRSC
John Challis - BSc, PhD, Dsc, FiBiol, FRCOG, FRSC
Allan Coates - BEng(Elect), MDCM
Nicholas Diamant - MDCM, FRCP(C)
Jonathan Dostrovsky - BSc, MSc, PhD
James Eubanks - PhD
George Fantus - BSc, MDCM, FRCP(C)
Zhong Ping Feng - MD, PhD
Paul Frankland - PhD, Canada Research Chair
Herbert Gaisano - BS, MD, FRCP(C)
Adria Giacca - MD
Gregory Hare
Robert Harrison - BSc, PhD, DSc
Scott Heximer - PhD, Canada Research Chair
Richard Horner - PhD
Mansoor Husain - BSc, MD
William Hutchison - PhD
Robert Jankov - MB, PhD, FRCPC
Zhengping Jia - PhD
Tianru Jin - MD, PhD
Nicola Jones - MD, FRCP(C), PhD
Sheena Josselyn - PhD, Canada Research Chair
Brian Kavanagh - MB FRCP(C)
Amira Klip - MSc, PhD, FRSC
Gary Lewis - MD, FRCP(C), Canada Research Chair
Fang Liu - PhD
Mingyao Liu - MSc, MD
Petter Liu - MD, FRCP(C)
Wei Yang Lu - MD, PhD
Stephen Lye - BSc, MI, PhD, Canada Research Chair
John MacDonald - BSc, PhD (Chair)
William Mackay - BSc, MSc, PhD
Stephen Matthews - BSc, DPhil
William McIlroy - BSc, MSc, PhD (Adjunct)
Freda Miller - BSc, PhD, FRSC, Canada Research Chair
Linda Mills - BSc, PhD
Philippe Monnier - MBA, PhD
Howard Mount - PhD
Dominic Ng - BSc, MSc, PhD, MD, FRCP(C)
Hugh Mervyn O’Brodovich - MD
Beverley Orser - MD, FRCP(C), PhD, Canada Research Chair
Cho Pang - BSc, MSc, PhD

Peter Pennefather - BSc, PhD
Martin Post - PhD, DVM, Canada Research Chair
Susan Elizabeth Quaggin - MD, Canada Research Chair
John Roder - BA, PhD, Canada Research Chair
Carol Rodgers - BPE, MHK, PhD
Norman Rosenblum - BSc, MD, FRCP(C), Canada Research Chair
Michael Salter - MD, PhD, Canada Research Chair
Bernard Schimmer - BS, PhD
Lynne Schlachter - BSc, MSc, PhD
Ze’ev Seltzer - DMD, Canada Research Chair
Barry Sessele - BDS, BSc, MSc, PhD, FRSC, Canada Research Chair
Frances Skinner - BMath, MA, A, PhD
Michael Sole - BSc, MD, FRCP(C)
Elise Stanley - PhD, Canada Research Chair
Shuzo Sugita - BA, MA, PhD, Canada Research Chair
Neil Sweezey - BSc, MD
Alan Tanswell - MBBS, DObstRCOG, MRCP, LMCC, FRCP
Scott Thomas - BSc, MSc, PhD
William Trimble - BSc, PhD, Canada Research Chair
Robert Tsuchiama - BSc(Hon), PhD
Douglas Tweed - MD, PhD
Michael Tymianski - MD, PhD, FRCS(C)
Mary (Molly) Verrier - DipP&OT, MHSc
Allen Volchuk - BSc, PhD, Canada Research Chair
Miaden Vranc - MD, DSc, FRSC
Lu-Yang Wang - PhD, Canada Research Chair
Qinghua Wang - MD, PhD
Michael Wheeler - BSc, PhD
Gregory Wilson - BSc, MSc, MD, FRCP(C)
Carin Wittnich - MSc, DVM
J. Martin Wojtowicz - BSc, PhD
Mei Zhen - BSc, PhD, Canada Research Chair
Min Zhuo - PhD, Canada Research Chair

**Members Emeriti**
David Butler - BSc, MSc, PhD, DSc, FiBiol
Kenneth Norwich - BSc, MSc, MD, PhD

**Associate Members**
Steffen-Sebastian Bolz - MD, PhD
Sirano Dhe-Paganon - BSc, PhD
Joseph Fisher
Anthony Gramolini - PhD
Andrea Jurisicova - PhD
Tony Lam - PhD
Evelyn Lambe - PhD
Cyril David Mazer
Jinrong Min - PhD
Heyu Ni - MD, PhD
Ian Rogers - MSc, PhD
Haibo Zhang - MD, PhD

334  Physiology
Political Science  POL

Faculty Affiliation
Arts and Science

Degree Programs Offered
Political Science – MA, Combined JD/MA, Combined JD/PhD, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Asia-Pacific Studies, see p. 413
   • Political Science, MA
2. Environmental Studies, see p. 443
   • Political Science, MA, PhD
3. Ethnic and Pluralism Studies, see p. 445
   • Political Science, MA, PhD
4. International Relations, see p. 458
   • Political Science, MA
5. Jewish Studies, see p. 460
   • Political Science, PhD
6. Sexual Diversity Studies, see p. 469
   • Political Science, MA, PhD
7. Women and Gender Studies, see p. 473
   • Political Science, MA, PhD

Overview
The Master of Arts 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 general or “departmental” MA program may choose from two specializations. The Political Theory stream is for students whose interests are primarily normative and philosophical. The Politics and Policy stream appeals to students with more practical interests. The department also offers a specialized MA program in the Political Economy of International Development.

The Combined Juris Doctor/Master of Arts program allows students to obtain an MA in International Relations as well as a JD degree in Law.

The Combined Juris Doctor/Doctor of Philosophy program enables students to acquire a PhD in Political Science as well as a JD in law.

The Doctor of Philosophy program offers courses in five core fields: Political Theory, Canadian Government and Politics, International Relations, Comparative Government—Developing Societies, Comparative Government—Industrial Societies. Many of the teaching and research interests of departmental faculty focus on areas that cross conventional core fields, designated as areas of specialization which provide an alternative way of structuring the graduate program. The current areas of specialization offered are: Public Policy (PP); Political Economy (PEC); Public Law and Federalism (PLF); Political Behaviour and Democratic Politics (PBD); Women, Gender, and Politics (WGP).

Contact and Address
Web: www.chass.utoronto.ca/polsci/information/graduate/graduate_information.htm
E-mail: poligrad@artsci.utoronto.ca
Telephone: (416) 978-2017

Department of Political Science
Room 3025, 100 St. George Street
University of Toronto
Toronto, Ontario M5S 3G3
Canada

Degree Programs

Degree of Master of Arts

Departmental Master of Arts Program

Minimum Admission Requirements
• Cumulative grade average of B+ or better in a bachelor’s program equivalent to a University of Toronto four-year 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 Web site (www.chass.utoronto.ca/polsci/information/graduate/application_procedures.htm).

Program Requirements
• Minimum of 4.0, full-course equivalents (FCE).
• Programs are normally completed in two sessions, except in environmental studies, which includes an internship, or in other programs where additional requirements or prerequisites must be met.
• A thesis may replace 1.0 political science FCE with the approval of the department.
• The equivalent of 1.0 FCE may be taken in a cognate discipline with the approval of the department.
• For students intending to proceed to a PhD at the University of Toronto, there are advantages to planning the MA program with a view to eventually meeting PhD requirements.
• The departmental MA comprises two streams:
  o Political Theory
  o Politics and Policy

Political Science  335
Students are admitted to one stream and may switch streams once in the program only with permission of the MA Supervisor.

**Political Theory Stream**
- This stream is intended primarily for students who wish to concentrate their studies in the theory area.
- Students in this stream will normally take 3.0 FCE in the political theory subfield and at least 1.0 FCE in an area outside political theory. All courses should be chosen in consultation with the MA Supervisor.

**Politics and Policy Stream**
- This stream is aimed at students with more empirical interests in political science. It is particularly designed to serve those who wish to apply their political science skills in the public service or in the private sector, as well those contemplating further academic study or research.
- Courses must include at least 0.5 FCE in political theory, which can be either the 0.5 FCE offered by the department specifically for this purpose (POL 2040H) or any other theory course. Also required is at least 0.5 FCE in statistics or research design. POL 2502Y, POL 2503H, and POL 2504H are among the courses currently offered by the department which meet this requirement. The final requirement is a full-year seminar which emphasizes an independent research project. POL 2810Y and POL 2811Y are the two seminars currently offered which meet this requirement. Courses in this program should be chosen in consultation with the MA supervisor.

**Specialist Program in Political Economy of International Development**

**Minimum Admission Requirements**
- Satisfactory background in political science and undergraduate prerequisites in microeconomics, macroeconomics, and statistics. A “satisfactory background in political science” means a minimum of five well distributed courses, including at least one relating to development. Those who lack any of these prerequisites must obtain them in addition to the required graduate courses. Therefore, this specialist program may take some entrants longer than one academic year to complete.

**Program Requirements**
- JPE 2408Y, complete the equivalent of 0.5 FCE in economics, normally ECO 2700H, selected from the economics course list (see listing in the Graduate Information Guide). One additional course must be chosen from the approved political science course list. The remaining course may be chosen from either the political science or political economy course lists.

**Combined Juris Doctor/Master of Arts, Law and Political Science (specialization in International Relations)**
- The combined JD/MA in International Relations allows for the completion of both degrees in three years rather than the four that the separate degrees would take.

**Minimum Admission Requirements**
- Students must be admitted to both the Faculty of Law and the Collaborative Master of Arts Program in International Relations (MAIR).

**Program Requirements**
- Year 1 – complete the first year of law in the combined program
- Years 2 and 3 – complete credits toward both JD and MA (Collaborative International Relations) degrees. The MAIR requirements in year 2 and 3 are JHP 2231H, ECO 2302H, LAW 252H, 1.0 FCE from MAIR electives and 1.5 FCE from the political science timetable

**Combined Juris Doctor/Doctor of Philosophy**
- The JD and PhD can be completed in at least one year less time than it would take to undertake the degrees separately.

**Minimum Admission Requirements**
- Students must be admitted to both the Faculty of Law and the Doctor of Philosophy Program

**Program Requirements**
- Year 1 - complete the first year of law in the combined program
- Year 2 - complete a year in Political Science
- Years 3 and 4 - two years in Law
- Complete the requirements of the PhD program, including a thesis.

**Doctor of Philosophy**

**Minimum Admission Requirements**
- Applicants may be admitted via one of three routes:
  - excellent students who have completed an MA degree in political science (or its equivalent) by the time of enrolment
  - excellent students who have completed the equivalent of a four-year B.A. with a concentration in political science by the time of enrolment. Students admitted to the PhD from a BA (or equivalent degree) who receive less than an A- average in their first four courses will be recommended to SGS for 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.
Applicants from both levels 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 instructions on the Web site (http://www.chass.utoronto.ca/polsci/information/graduate/application_procedures.htm)

Program Requirements

- PhD students have the option of organizing their course work in one of two ways:
  - **A major core field and a minor core field.** Students who choose this option must fulfill the 1.0 core FCE requirement plus the equivalent of another 1.0 FCE in the major field, and the core course plus the 1.0 FCE in the minor field.
  - **A major core field and an area of specialization.** Students who choose this option must fulfill the core 1.0 FCE requirement plus the equivalent of another 1.0 FCE in the major field and the equivalent of 2.0 FCE in their area of specialization, at least one of which must be outside the major field.

- **Major field examination.** By the end of Year 2, all PhD students will be expected to have taken an examination in the major field. In the fields of Canadian Government and Politics, International Relations, Comparative Government—Developing Societies, and Comparative Government—Industrial Societies, the examination is based largely on the subject matter of the core course. In Political Theory, it is based on a list of texts made available by the department.

- **Thesis proposal, thesis committee, and thesis schedule.** Students should assign a high priority to defining a thesis topic and choosing a thesis committee. The research and writing of the thesis will follow the acceptance of the thesis proposal.

- **Language requirement.** Students must demonstrate competence in French or in an approved language appropriate to the nature of the graduate work in which they are engaged.

**Students with MA**

- Students should aim to complete PhD requirements within five years.
- 2.0 to 5.0 FCE depending on student's relevant background in the major and minor field or area of choice. All PhD students are required to have at least 0.5 graduate FCE in political theory. All PhD students in majors other than political theory are also required to complete 0.5 FCE in research design. 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. Most students who enter from the MA will take the equivalent of 3.0 FCE to satisfy program requirements; all PhD students must take a minimum of 2.0 FCE with the department after entering the PhD program.

- Minimum of three sessions in residence.

**Students with BA**

- Students should aim to complete PhD requirements within six years.
- 6.0 FCE 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 field and/or area requirements as described for those entering the PhD program with an MA.

- Minimum of six sessions in residence.

**Courses**

Some courses listed have an undergraduate component and begin the first week of the session. POL 2501Y is a general research design course, the research component of which depends on the student's declared area of specialization. Thus, half of the credit for this course may be counted for credit in the major field, though not in political theory. Not all courses are given every year. Consult the departmental timetable.

**Political Theory**

- POL 2000Y Comparative Studies in the History of Political Thought *(core course)*
- POL 2001Y Problems of Political Community
- POL 2004Y Marxism
- POL 2006H Studies in Modern Political Theory
- POL 2007Y Twentieth-Century Political Thought
- POL 2008Y The Political Theory of G. W. F. Hegel
- POL 2010H Democratic Theory
- POL 2011H Problems in the Political Thought of the Socratic School
- POL 2014H The Problem of Natural Right
- POL 2016H Topics in the Philosophy of Law
- POL 2019Y The Political Philosophy of Political Economy
- POL 2021Y Comparative Studies in Jewish and Non-Jewish Political Thought
- POL 2024H Feminist Theory: Challenges to Legal and Political Thought
- POL 2025Y Enlightenment and Its Critics
- POL 2026H Topics in Political Thought I
- POL 2027H Topics in Political Thought II
- JPJ 2028H Constitutional Theory
- POL 2030Y Democratic Citizenship
- POL 2032H Judgement in Law and Politics

**Degree Programs**
Degree Programs

**Political Science**

JPJ 2036Y Comparative Constitutionalism: Rights and Judicial Review
POL 2037H Law, Religion and Public Discourse
JPD 2037Y Post-Modern and Contemporary Thought
POL 2038Y Pluralism, Justice and Equality
POL 2040H Horizons of Political Reflection
JPJ 2047H Comparative Constitutional Law and Politics
POL 2071H The Political Thought of George Grant
POL 2083H Cosmopolitanism
POL 2127Y Multiculturalism in Canada
PHL 2141H Political Philosophy
POL 2226H Ethics and International Relations
POL 2235H Development, International Relations, Globalization: Through the Lens of a Gender
POL 2423H Colonialism/Post-Colonialism: The Colonial State and its Forms of Power
POL 2801H Special Topics II
RLG 3622H Maimonides and His Modern Interpreters

**Canadian Government and Politics**

POL 2100H Government of Canada (core course)
POL 2700H Comparative Politics (core course)
POL 2102H Topics in Canadian Politics I
POL 2103H Topics in Canadian Politics II
POL 2110H The Politics of Public Sector Budgeting
JPJ 2116H Constitutional Politics
JPJ 2120H Law and Public Policy
JPJ 2121H Federalism and Governance in Canada
POL 2125H Experiencing Public Policy-Making
POL 2126H Canadian Public Sector Management
POL 2127Y Multiculturalism in Canada
POL 2139H The Canadian Welfare State in Comparative Perspective
POL 2190Y Topics in Canadian Politics I
POL 2191Y Topics in Canadian Politics II
JPJ 2202H Public Law, Social Regulation and Poverty
POL 2228H Dynamics of the Global Trade System
POL 2317H Politics and Policy Analysis
JPJ 2430Y Cities
HAD 5011H Canada’s Health System and Health Policy
HAD 5765H Case Studies in Health Policy

**International Relations**

POL 2200Y International Politics (core course)
DGC 1000H Core Issues in the Dynamics of Global Change
DGC 2000H Special Topics in the Dynamics of Global Change
DGC 2001H Special Topics in the Dynamics of Global Change
DGC 2002H Special Topics in the Dynamics of Global Change
DGC 2003H Special Topics in the Dynamics of Global Change
JHP 1631H Intelligence and International Relations
JPJ 2031H Telecommunications and Internet Law
JPJ 2035H International Taxation
JPJ 2037H International Trade Regulation
JPJ 2039H European Community Law
JPJ 2042H Labour Policy
JPJ 2045H Institutionalizing Doubt: Modernity and the Challenge to Traditional Legal Traditions
JPJ 2046H Law, Institutions and Development
JPJ 2048H International Human Rights Law
JPJ 2049H International Women's Rights Law
JPJ 2050H Legal Issues in Cyberspace
JPJ 2051H Foundations of the Law of the European Union
POL 2202H Advanced Topics in International Political Economy

**Comparative Government (Industrial Countries)**

POL 2300H Comparative Politics of Industrial Societies (core course)
POL 2700H Comparative Politics (core course)
JPV 1201H Politics, Bureaucracy, and the Environment
JHP 1289Y Twentieth-Century Ukraine
JPJ 2036Y Comparative Constitutionalism: Rights and Judicial Review
JPJ 2047H Comparative Constitutional Law and Politics
JPJ 2116H Constitutional Politics
JPJ 2121H Federalism and Governance in Canada
POL 2139H The Canadian Welfare State in Comparative Perspective
POL 2202H Advanced Topics in International Political Economy
Degree Programs

**Political Science**

POL 2234H Globalization, Internationalization, and Public Policy
POL 2302H Topics in United States Government and Politics
POL 2304Y Topics in Soviet and Post-Soviet Politics (exclusion to POL 2324H)
POL 2307H Political Economy of Technology: From the Auto-Industrial to the Information Age
POL 2308Y Politics and Governments of Eastern Europe
POL 2313Y Comparative Political Parties and Elections
POL 2314H Political Economy of Asia Pacific
POL 2316H Women and Politics
POL 2317H Politics and Policy Analysis
POL 2318H Comparative Public Policies: Selected Areas
POL 2321H Topics in Comparative Politics I
POL 2322H Topics in Comparative Politics II
POL 2322Y Topics in Comparative Politics II
POL 2323Y Multilevel Politics: The European Union in Comparative Perspective
POL 2324H Ethnonationalism and State-Building: The Communist and Post-Communist Experience (exclusion to POL 2304Y)
POL 2325Y The Politics of Post-Communism
POL 2338H Innovation and Governance
POL 2341H Nationalism, Myths and Identity: Ukraine and the CIS
POL 2344H Identity, Democracy and Autocracy in Ukraine
POL 2372H The Comparative Political Economy of Industrial Societies
POL 2391H Topics in Comparative Politics III
POL 2392Y Topics in Comparative Politics IV
JPJ 2394H Innovation and Knowledge Transfer
POL 2411H Topics in Asian Politics
POL 2429Y Nationalism, Ethnic Conflict, and Democracy
JPF 2430Y Cities

**Comparative Government (Developing Countries)**

POL 2400H Theories and Issues - The Politics of Development (core course)
POL 2700H Comparative Politics (core course)

JPF 1201H Politics, Bureaucracy and the Environment
JPV 2208Y Third World Politics in International Affairs
POL 2218H The Political Economy of International Trade
POL 2234H Globalization, Internationalization, and Public Policy
POL 2235H Development, International Relations, and Gender
POL 2314H Political Economy of Asia Pacific
POL 2322H Topics in Comparative Politics II
POL 2391H Topics in Comparative Politics III
POL 2392Y Topics in Comparative Politics IV
POL 2403H Topics in African Politics I
POL 2404H,Y Topics in African Politics II
POL 2405H Topics in Latin American Politics
JPE 2408Y Political Economy of International Development
POL 2409Y Politics and Planning in Third World Cities
POL 2411H Topics in Asian Politics
JPE 2415Y Research Essay: Political Economy of Development
POL 2416Y Politics and Society in Contemporary China
POL 2418H Topics in Middle East Politics
POL 2420H Globalization, Gender and Development
POL 2423H Colonialism/Post-Colonialism
POL 2429Y Nationalism, Ethnic Conflict, and Democracy
JPF 2430Y Cities
POL 2482H The Politics of Disease and Epidemic

**Miscellaneous**

POL 2501Y Research Methods and Design to Dissertation Seminar: Issues in Research Design
POL 2502Y Quantitative Methods and Data Analysis
POL 2503H Thinking Through Research Design
POL 2504H Statistics for Political Scientists
POL 2505H Qualitative Methods in Political Research
POL 2800H Intensive Course
POL 2810Y MA Research Seminar I
POL 2811Y MA Research Seminar II
POL 2904Y Reading course in an approved special field
POL 2905H Reading course in an approved special field
POL 2906Y Reading course in an approved special field

**Graduate Faculty**

**Full Members**

- Emanuel Adler - BA, MA, PhD, Andrea and Charles Bronfman Chair in Israeli Studies
- Robert Andersen - BA, MA, PhD
- Sylvia Bashevkin - BA, MA, PhD
- Harald Barthelt - MA, Diplom, PhD, Habilitation (Post Doc), CRC
- Ronald Beiner - BA, DPhil
- Jacques Bertrand - BA, MSc, MA, PhD
- Aurel Braun - BA, MA, PhD
- Alan S Brudner - BA, MA, LLB, PhD
- David Cameron - MSc, BA, PhD (Chair)
- Joseph Carens - AB, MPhil (Theol), MPhil, PhD
- Simone Chambers - BA, MA, MPhil, PhD (Coordinator of Graduate Studies)
- David Cook - BA, MA, PhD
- Frank Cunningham - BA, MA, PhD, FRSC
- Richard Day - BA, MA, Dip REES, PhD
- Raisa Deber - SB, SM, PhD
- Ronald Deibert - BA, MA, PhD
- Dickson Eyoh - BA, MA, PhD
- Victor Falkenheim - BA, MA, PhD
- Joseph Fletcher - BA, MA, PhD
Degree Programs

Donald Forbes - BA, MA, PhD
Rodney Haddow - BA, MScEcon, PhD
Randall Hansen - BA, MPhil, DPhil, Canada Research Chair
Ran Hirsch - BA, LLB, MA, MPhil, PhD, Canada Research Chair
Thomas Homer-Dixon - BA, PhD
Paul Kingston - BA, MA, MPhil, DPhil
John Kirton - BA, MA, PhD
Nancy Kokaz - BA, BA, MA, PhD
Jeffrey Kopstein - BA, MA, PhD
Lawrence LeDuc - BA, MA, PhD
Paul Magocsi - AB, MA, MA, PhD, FRSC
Patricia McCarney - BA, MCR, PhD
Jennifer R Nedelsky - BA, MA, PhD
Neil Nevitte - BA, MA, PhD
Clifford Orwin - AB, MA, PhD
Louis Pauly - BA, MA, MSc, MA, PhD, Canada Research Chair, Director
David Rayside - BA, AM, PhD
Kent Roach - BA, LLB, LLM
Arthur Rubinoff - BA, MA, PhD
Richard Sandbrook - BA, MA, DPhil, FRSC
Edward Schatz - PhD
David Schneiderman - BA, LLB, LLM
Donald Schwartz - BA, MA, PhD
Richard Simeon - BA, MA, PhD
Grace Skogstad - BA, MA, PhD
Peter Solomon - BA, MA, CertRussInst, PhD
Susan Solomon - BA, MA, CertRussInst, PhD
Janice Stein - BA, MA, PhD, FRSC, University Professor, Belzberg Professor of Conflict Management and Negotiation
Judith Ann Teichman - BA, MA, PhD
Carolyn Tuohy - BA, MA, PhD, Senior Fellow School of Public Policy and Governance
Robert Vipond - BA, AM, MA, PhD
Lorraine Weinrib - BA, LLB, LLM
David Welch - BA, AM, PhD, Ignatief Chair
Graham White - BA, MA, PhD
Linda White - BA, MA, PhD
Melissa Williams - AB, AM, PhD
Nelson Wiseman - BA, MA, PhD
David Wolfe - BA, MA, PhD
Joseph Wong - BA, MA, PhD, Canada Research Chair

Richard Stren - BA, MA, PhD
Melville Watkins - Bach Commerce

Associate Members

Nida Alahmad
Ana Maria Bejarano - BA, MA, PhD
Solomon Benjamin - BAarch, MSArchS, PhD
Steven Bernstein - BA, MA, PhD
Sandford Borins - BA, MPP, PhD
Sujit Choudhry - BSc, BA, LLB, LLM
Lilach Gilady - MA, BA, MPhil, PhD
Antoinette Handley - BA, MPhil, PhD
Alisa Henderson - PhD
Matthew Hoffmann - BS, PhD
Gustavo Indart - BA, MA, PhD
Rebecca Kingston - BA, MA, PhD, CEP
Margaret Kohn - BA, MA, PhD
Renan Levine - BA, PhD
Wambui Mwangi - BA, MA, PhD
Carla Norrolof - BA, MA, DES, PhD
David Pond - PhD
Ayelet Shachar - BA, MA, LLB, LLM, JSD
Andrew Stark - BA, MSc, MA, PhD
Phil (Triadafilos) Triadafloopoulos - BA, MA, PhD
Lucan Alan Way - BA, MA, PhD

Members Emeriti

Edward Andrew - BA, PhD
Stephen Clarkson - BA, MA, D de Rech
Michael Donnelly - BS, Institute Certificate, MA, PhD
Richard Gregor - BA, MA, PhD
Franklyn J. Griffiths - BA, MBA, PhD
Gad Horowitz - BA, MA, PhD
Alkis Kontos - Barrister at Law, MA, PhD
Ronald Manzer - BA, BEd, MA, PhD
Robert Matthews - BA, MBA, MA, PhD
R Cranford Pratt - BA, MPhil
Abraham Rotstein - BA, MA, PhD
Paul Russell - BA, BA, LLB, FRSC, OC, University Professor Emeritus
Degree Programs

Professional Graduate Programs Centre (Mississauga)
PGPC

Faculty Affiliation
Professional Graduate Programs (Mississauga)

Degree Programs Offered
Management & Professional Accounting
– MMPA

Diploma Programs Offered
Investigative & Forensic Accounting - DIFA

Overview
The Master of Management & Professional Accounting (MMPA) is designed to educate 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. Advanced standing may be granted.

The Diploma in Investigative & Forensic Accounting (DIFA) provides a rigorous and comprehensive education in investigative and forensic accounting (IFA) matters useful in becoming an expert IFA consultant, practitioner, and expert witness in legal proceedings. Expertise may include financial matters related to investigation for fraud, calculation of damages, advisors in disputes, and preparers and deliverers of information to the courts. For students who are graduate Chartered Accountants, the diploma program is the educational gateway to the CA·IFA post-graduate specialist designation offered by the Canadian Institute of Chartered Accountants.

Contact and Address
Professional Graduate Program Centre
Web: www.utm.utoronto.ca/research
E-mail: devin.kreuger@utoronto.ca
Telephone: (905) 828-5357
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Room 2035, South Building
3359 Mississauga Road N
Mississauga, Ontario L5L 1C6
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Management & Professional Accounting
Web: www.utoronto.ca/mmpa
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Fax: (905) 569-4306
Room K108, Kanef Centre
University of Toronto at Mississauga
3359 Mississauga Road North
Mississauga, Ontario L5L 1C6
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Investigative & Forensic Accounting
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University of Toronto at Mississauga
3359 Mississauga Road
Mississauga, Ontario L5L 1C6
Canada

Degree Programs

Management & Professional Accounting

Master of Management & Professional Accounting

Minimum Admission Requirements
• Undergraduate degree equivalent to a four-year program at the University of Toronto with a standing equivalent to at least mid-B.
• Satisfactory GMAT score.
• Proof of English facility if the applicant’s first language is not English. Details on English language requirements are available in this calendar.

Program Requirements
• Program runs for 27 months covering 7 sessions of full-time study, including 5 academic sessions and 2 co-op work placement sessions in accounting- or finance-related areas. The final session of the program will include a professional integrating experience (PIE) consisting of a four-week period in which students will complete one or more of the following:
  o attend the professional school of a professional accounting body, or
  o write professional accounting examinations, or
  o complete a consulting or work-term project
• Prescribed curriculum consists of 33 courses plus a professional integrating experience (PIE) covering an aggregate of 71 modules. Students may choose to take either MGT 2070H or MGT 2208H in their final academic session.
• All requirements for the degree must be completed within six years from the date of first enrolment.

Courses
Notations for all courses are indicated in parenthesis following the course code and are determined as follows:

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>CR/NCR (Credit/No Credit)</td>
</tr>
<tr>
<td>1</td>
<td>one module</td>
</tr>
<tr>
<td>2</td>
<td>two modules (half-course equivalent)</td>
</tr>
<tr>
<td>3</td>
<td>three modules</td>
</tr>
</tbody>
</table>

One module equals 5 weeks with 3 contact hours per week.
The department should be consulted each session as to course offerings.

MGT 1090H(0)+ Accounting Work-Term Course I
MGT 1102H(1) Business and Professional Ethics
MGT 1210H(2) Managerial Economics
MGT 1211H(2) Economic Environment of Business
MGT 1221H(2) Accounting I
MGT 1222H(2) Managerial Accounting
MGT 1241H(2) Operations Management
MGT 1260H(2) Leadership in the Management of Teams
MGT 1272H(2) Management Information Systems
MGT 1301H(3) Fundamentals of Strategic Management
MGT 1323H(3) Auditing and Reporting
MGT 1330H(3) Business Finance
MGT 1350H(3) Marketing
MGT 1362H(3) Managing People in Organizations
MGT 1382H(3) Statistics for Management
MGT 2014H(2) The Legal Environment of Professions and Corporations
MGT 2070H(1) Management Consulting (elective course)
MGT 2090H(0)+ Accounting Work-Term Course II
MGT 2205H(3) Advanced Financial Accounting
MGT 2206H(3) Taxation I
MGT 2207H(2) Taxation II
MGT 2208H(1) Taxation III (elective course)
MGT 2224H(2) Computer Auditing
MGT 2259H(2) Advanced Auditing Topics
MGT 2250H(3) Financial Reporting I
MGT 2251H(3) Financial Reporting II
MGT 2260H(3) Management Control
MGT 2261H(2) Advanced Management Accounting
MGT 2273H(3) Accounting Information Systems
MGT 2280H(2) Accounting Theory and Research
MGT 2281H(1) Seminar in Professional Accounting
MGT 2282H(1) Integrative Cases in Professional Decision Making
MGT 2301H(2) Financial Management

Diploma Programs

Investigative & Forensic Accounting

Diploma of Investigative & Forensic Accounting

Minimum Admission Requirements
• Undergraduate degree equivalent to a four-year program at the University of Toronto in Commerce, Business Administration, or Accounting, with a standing equivalent to at least a mid-B in the final undergraduate year.
• Two years of relevant experience in accounting.

Program Requirements
• 10 half-course program over a minimum 2.2 year period. Courses are taken sequentially and advanced standing course exemptions are possible. The program is offered using a combination of two one-week intensive in-residence sessions, e-learning and teleconference modules, with group discussions, assignments, and formal examinations. It is possible for students to participate from anywhere in the world.

Courses
IFA 1900H Introduction to Investigative and Forensic Accounting
IFA 1901H Investigative and Forensic Accounting Practice Issues
IFA 1902H Legal Process—Introductory
IFA 1903H Investigative-related Matters—Introductory
IFA 1904H Loss Quantification—Introductory
IFA 2900H Loss Quantification—Advanced
IFA 2901H Investigative-Related Matters—Advanced
IFA 2902H Legal Process—Advanced
IFA 2903H Advanced Topics/Emerging Issues
IFA 2904H Integrative Capstone

Courses IFA 1900H and IFA 2904H each involve a mandatory in-residence session at the University of Toronto Mississauga. IFA 2904H requires participation in moot court and other experiential learning sessions. The remaining eight courses are offered via weekly online sessions.

+Extended course. For academic reasons, course work is extended into session following academic session in which course is offered.
Graduate Faculty

Management & Professional Accounting

**Full Members**
- Varouj Aivazian - BS, MA, PhD
- Leonard Brooks - BCom, MBA, FCA, CA
- Yue Li - BSc, MBA, PhD
- Wendy Rotenberg - BA, MBA, PhD
- Waldemar Smieliauskas - BS, MS, PhD
- Mihkel Tombak - BASc, MBA, AM, PhD
- Anthony Wensley - BA, PGCE, MA, MBA, PhD

**Associate Members**
- Guy Allen - BA, MA, PhD
- Mark Weber - BA, MA, MBA, PhD

Diploma of Investigative & Forensic Accounting

**Full Members**
- Leonard Brooks - BCom, MBA, FCA, CA *(Program Director)*
- Waldemar Smieliauskas - BS, MS, PhD
Degree Programs

Psychology  PSY

Faculty Affiliation
Arts and Science

Degree Programs Offered
Psychology - MA, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Addiction Studies, see p. 406
   - Psychology, MA, PhD
2. Aging, Palliative and Supportive Care Across the Life Course, see p. 408
   - Psychology, MA, PhD
3. Developmental Science, see p. 434
   - Psychology, MA, PhD
4. Neuroscience, see p. 466
   - Psychology, MA, PhD
5. Women’s Health, see p. 478
   - Psychology, MA, PhD

Overview
Graduate training in psychology stresses training in general experimental psychology. Areas of specialization include the following: brain and behaviour, perception and cognition, developmental psychology, social psychology, and personality/abnormal psychology. The Department does not offer instruction or specialization in clinical psychology. In all areas, the emphasis is on training for experimental research.

Contact and Address
Web: www.psych.utoronto.ca
E-mail: grad@psych.utoronto.ca
Telephone: (416) 978-3404
Fax: (416) 978-4811

Department of Psychology
Graduate Studies
Room 4034, Sidney Smith Hall
University of Toronto
Toronto, Ontario M5S 3G3
Canada

Degree Programs

Master of Arts

Minimum Admission Requirements
- Appropriate four-year University of Toronto bachelor's degree, or its equivalent 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 (FCE) in psychology including statistics and some laboratory experience.

Program Requirements
- One academic year of graduate study.
- Courses and individual research training leading to a thesis.
- In the MA year, students must complete the following 2.0 FCE as follows:
  - PSY 1000H Directed Studies to prepare for the MA thesis research
  - PSY 2001H Design of Experiments I, experimental design and statistics
  - two half-courses
  - 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 normally required.

Doctor of Philosophy

Minimum Admission Requirements
- Appropriate University of Toronto master's degree, or its equivalent from a recognized university, with a minimum A- average, and adequate research performance.

Program Requirements
- Minimum of two years of residence beyond the master's degree, but usually takes at least three years. Applicants with a master's degree from another university may be required to enrol in a three-year residence program.
- Individual programs of study are planned and include continuing research training with staff members. There is no language requirement.
- PSY 3000H Research Project in Psychology - usually taken in PhD 1. This is a research project course supervised by a faculty member other than the student's PhD supervisor. It is a one-session course spread over PhD 1.
- PSY 3001H Scientific and Professional Psychology - usually taken in PhD 1.
- An advanced statistics course chosen from a list provided by the Department.
- Two half-courses.
- PSY4000H. Thesis proposal and oral exam (examination in the student’s area of specialization).
- PhD thesis.
- Students may take other courses as they wish, but it is expected that the requirements will be completed in the first two years of the PhD program. Students admitted with an MA from another university will normally be required to fulfill the Ph.D. requirements; however, exemptions may be granted by the graduate director of the Department of Psychology.
Courses
Not all courses are offered each year. For current offerings, consult the Coordinator of Graduate Studies.

PSY 1000H Directed Studies
PSY 1200H,Y Selected Topics in Psychology
PSY 1500H Conceptual Bases of Psychology
PSY 2001H Design of Experiments I
PSY 2002H Design of Experiments II

Biology and Behaviour

Core Courses
PSY 5101H Mechanisms of Behaviour
PSY 5102H Motivational Processes
PSY 5103H Learning and Plasticity
PSY 5104H Neuropsychology

Advanced Courses
PSY 5110H Advanced Topics in Behavioural Neuroscience I
PSY 5111H Advanced Topics in Behavioural Neuroscience II
PSY 5112H Advanced Topics in Behavioural Neuroscience III
PSY 5120H Advanced Topics in Animal Behaviour and Motivation I
PSY 5121H Advanced Topics in Animal Behaviour and Motivation II
PSY 5122H Advanced Topics in Animal Behaviour and Motivation III
PSY 5130H Advanced Topics in Neuropsychology I
PSY 5131H Advanced Topics in Neuropsychology II
PSY 5132H Advanced Topics in Neuropsychology II

Perception/Cognition/Cognitive Neuroscience

Core Courses
PSY 5201H Audition
PSY 5202H Vision
PSY 5203H Higher Cognition
PSY 5204H Attention
PSY 5205H Memory

Advanced Courses
PSY 5210H Advanced Topics in Perception I
PSY 5211H Advanced Topics in Perception II
PSY 5212H Advanced Topics in Perception III
PSY 5220H Advanced Topics in Cognition I
PSY 5221H Advanced Topics in Cognition II
PSY 5222H Advanced Topics in Cognition III

Developmental Psychology

Core Courses
PSY 5300H History, Theory and Methods of Developmental Psychology
PSY 5301H Biological Development
PSY 5302H Perceptual Development
PSY 5303H Cognitive Development
PSY 5304H Language Development
PSY 5305H Social Development

Advanced Courses
PSY 5310H Advanced Topics in Development I
PSY 5311H Advanced Topics in Development II
PSY 5312H Advanced Topics in Development III
PSY 5313H Advanced Topics in Development IV

Social/Personality/Abnormal Psychology

Core Courses
PSY 5401H Abnormal
PSY 5402H Personality
PSY 5403H Social Cognition
PSY 5404H Interpersonal and Group Behaviour

Advanced Courses
PSY 5410H Advanced Topics in Abnormal I
PSY 5411H Advanced Topics in Abnormal II
PSY 5412H Advanced Topics in Abnormal III
PSY 5420H Advanced Topics in Personality I
PSY 5421H Advanced Topics in Personality II
PSY 5422H Advanced Topics in Personality III
PSY 5430H Advanced Topics in Social Psychology I
PSY 5431H Advanced Topics in Social Psychology II
PSY 5432H Advanced Topics in Social Psychology III
PSY 5433H Advanced Topics in Social Psychology IV
PSY 3000H+ Research Project in Psychology
PSY 3001H Professional Psychology (Credit/No Credit)
PSY 3002H Teaching Practicum (Credit/No Credit)
PSY 4000H+ Specialization Study (Credit/No Credit)

Advanced Courses
PSY 4700H Psychology Testing and Assessment I
PSY 4701H Psychology Testing and Assessment II
PSY 4705H Psychological Assessment of Children
PSY 4710H Practicum in Testing and Assessment (Credit/No Credit)
PSY 4711H Practicum in Applied Psychology (Credit/ No Credit)
PSY 4720H,Y+ Internship in Applied Psychology (Credit/ No Credit)

Cross-Listed Courses
CSC 2535H Computation in Neural Networks
JLP 2450H Psycholinguistics
JNS 1000Y Fundamentals of Neuroscience: Systems and Behaviour
JNS 1001H Neuroanatomy of Mind
JNX 1001Y Parenting: Multidisciplinary Perspectives
JPM 1005Y Behavioural Pharmacology
ZOO 2215Y Insect Behaviour

*Courses which may continue over a program. The course is graded when completed
+Extended course. For academic reasons, course work is extended into session following academic session in which course is offered.
Graduate Faculty

Full Members
Claude Alain - BA, MA, PhD
Thomas Allaway - BA, MA, PhD
Adam Anderson - BA, PhD, Canada Research Chair
Nicole Anderson - BA, MA, PhD, CPsych
Janet Astington - BA, BSc, MA, PhD
Leslie Atkinson - BA, MA, PhD, CPsych
John Bassili - BA, PhD
Kirk Blankstein - BA, MA, PhD
Douglas Bors - BA, MA, PhD, PhD
Craig Chambers - BA, MA, PhD
Alison Chasteen - BA, MA, PhD
Carl Corter - BA, PhD, Atkinson Charitable Foundation
Chair in Early Child Development and Education
George Scott Cree - BA, MA, PhD
John Cunningham - BSc, MA, PhD
William Cunningham - BA, MA, MSc, MPhil, PhD
Gerald Chaim Cupchik - BA, MA, PhD
Meredith Daneman - BA, MA, PhD
Eve De Rosa - BA, PhD
Maureen Dennis - BA, MA, PhD
Karen Dion - BA, PhD
Kevan Dunbar - BA, MA, PhD
Gillian Einstein - PhD
Suzanne Erb - BSc, MA, PhD
Susanne Ferber - MSc, PhD
Alison Fleming - BS, PhD
Paul Fletcher - BSc, DPhil
Marc Fournier - BA, PhD
Tony George - BSc, MD
Robert Gerlai - MSc, PhD
David Goldstein - BA, MA, PhD
Cheryl Grady - BA, MA, PhD
Joan Grusec - BA, PhD
David Hailey - BA, MA, PhD
Lynn Hasher - AB, PhD
Charles Helwig - BA, PhD
C Peter Herman - BA, PhD
C Ross Hetherington - BSc, MA, PhD
Michael Inzlicht - BSc, MSc, PhD
Gwendolyn Ivy - BA, PhD
Jennifer Jenkins - BA, MA, PhD, CPsych
Elizabeth Johnson - BA, BSc, MA, MSc, PhD
Steve Joordens - BA, MA, PhD
John Kennedy - BSc, MSc, PhD
Gary Kraemer - PhD
Gary Latham - BA, MS, PhD, FRSC
Brian Levine - BA, MA, PhD
Marc Lewis - BA, MA, PhD, CPsych
Penelope Lockwood - BA, MA, PhD
Maureen Lovett - BSc, MSc, PhD
Geoffrey MacDonald - BA, PhD
Mary Patricia McAndrews - BSc, MA, PhD
Anthony Randal McIntosh - BSc, MSc, PhD
Norton Milgram - BA, MA, PhD
Ashley Monks - BS, MSc, PhD
Giampaolo Moraglia - BPhil, MA, MS, PhD
Morris Moscovitch - BSc, MA, PhD, Dr, Max and Gianna Glassman Chair of Neuropsychology
Paul Muter - BA, MA, PhD
Matthias Niemeier - MA, PhD
Jose Nobrega - BA, MA, PhD
David Nussbaum - BA, MA, PhD
Jordan Peterson - BA, PhD
Ted Petit - BS, MA, PhD
Laura Ann Petitto - BSc, MA, MSc, PhD
Kathy Pichora-Fuller - BA, MSc, PhD
Terry Picton - MD, MSc, PhD
Jason Plaks - BA, MA, MPhil, PhD
Patricia Pliner - PhD
Janet Polivy - BS, MA, PhD
Constantine Poulos - BS, MA, PhD
Jay Pratt - BA, MA, PhD (Graduate Director)
Martin Ralph - BSc, PhD
Arun Ravindran - MBBS, MSc, PhD, FRCP(C), FRCPsych
Eyal Reingold - PhD
Joanne Rovet - BSc, PhD
Jennifer Ryan - BS, PhD, Canada Research Chair
Jean Saint-Cyr - BA, MA, PhD
Glenn Schellenberg - BSc, PhD
Ulrich Schimmack - BA, MA, PhD
Mark Schmuckler - BA, PhD
Bruce Schneider - BA, PhD
Sara Shettleworth - BA, MA, PhD
Paul Shuper - BA, MA, PhD
Mary Louise Smith - BSc, MSc, PhD
Ronald Smyth - BA, MSc, PhD
Ian Spence - MA, PhD
Donald Stuss - BA, BPh, MA, PhD, University Professor
Jennifer Tackett - BA, PhD
Romin Talarodi - BA, PhD
Margot Taylor - BA, MA, PhD
William Thompson - PSc, MA, PhD
Franco Vaccarino - BSc, MSc, PhD
Pascal van Lieshout - PhD
Gordon Winocur - BA, MA, PhD
John Yeomans - BA, PhD
Konstantine Zakhazis - BA, MA, PhD
Phil Zelazo - PhD
Kenneth Zucker - BA, MA, PhD, CPsych

Members Emeriti
Rona Abramovitch - BA, MA, PhD
Fergus Craik - BSc, PhD, University Professor Emeritus
Martin Evans - BSc, MScTech, MIA, PhD
Jonathan Freedman - BA, PhD
Robert Lockhart - BA, MA, PhD
Nicholas Moscovitch - BA, Phd
Keith Oatley - BA, PhD
Marilyn Smith - BA, PhD
Sandra Trehub - BComm, MA, PhD
Endel Tulving - BA, PhD, University Professor Emeritus
Blossom Wigdor - BA, PhD

Associate Members
Michelle Keightley - BSc, MA, PhD
Donald Mabbott, MD
Public Health Sciences  CHL

Degree Programs

Faculty Affiliation
Medicine

Degree Programs Offered
Public Health Sciences – MHSc, MSc, PhD, MScCH

Collaborative Programs Offered
Degree programs that participate in:
1. Aboriginal Health, see p. 404
   • Public Health Sciences, MHSc, MSc, PhD
2. Addiction Studies, see p. 406
   • Public Health Sciences, MHSc, MSc, PhD
3. Aging, Palliative and Supportive Care Across the Life Course, see p. 408
   • Public Health Sciences, MHSc, MSc, PhD
4. Bioethics, see p. 416
   • Public Health Sciences, MHSc, MSc, PhD
5. Cardiovascular Sciences, see p. 426
   • Public Health Sciences, MHSc, MSc, PhD
6. Community Development, see p. 428
   • Public Health Sciences, MHSc
7. Environment and Health, see p. 439
   • Public Health Sciences, MHSc, MSc, PhD
8. Health Care, Technology and Place, see p. 454
   • Public Health Sciences, PhD
9. Health Services and Policy Research, see p. 456
   • Public Health Sciences, MHSc, MSc, PhD
10. Women and Gender Studies, see p. 473
   • Public Health Sciences, MHSc, MSc, PhD
11. Women’s Health, see p. 478
   • Public Health Sciences, MHSc, MSc, PhD

Overview

The Department of Public Health Sciences offers four graduate degree programs, available both full time and part time. A complete description of all programs is available on the departmental Web site: www.phs.utoronto.ca

The Master of Health Science (MHSc) program is designed for students interested in professional and/or research careers in the community, academic, public, or private sectors. Four specializations are offered:
1. Community Health and Epidemiology
2. Community Nutrition
3. Health Promotion
4. Occupational and Environmental Health

The Master of Science (MSc) program is for students interested in research and academic careers in Biostatistics.

The Doctor of Philosophy (PhD) prepares students for research and academic careers in the Public Health Science disciplines. Specializations include:
1. Biostatistics
2. Epidemiology
3. Social and Behavioural Health Sciences

The PhD program may be completed on a full-time or flexible-time basis.

Contact and Address
Web: www.phs.utoronto.ca
E-mail: chl.grad@utoronto.ca
Telephone: (416) 978-2058
Fax: (416) 978-1883

Graduate Department of Public Health Sciences
Room 620, 155 College Street
University of Toronto
Toronto, Ontario M5T 3M7
Canada

Degree Programs

Master of Health Science

Minimum Admission Requirements
• Appropriate four-year undergraduate 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.
• Each specialization has unique requirements; refer to the Web site for details.

Program Requirements
• 10.0 full course equivalents (FCE), of which 0.5 FCE is a core subject and at least 1.0 FCE is a field practicum.
  o Full-time students, depending on the area of specialization, require between 16 and 22 months to complete the program, including time spent in field practica. Specific program requirements, course sequences, and options vary by area of specialization and are fully explained on the Web site.
  o Part-time students have a maximum of six years to complete the program.
Degree Programs

Master of Science

Minimum Admission Requirements
• Appropriate four-year undergraduate degree from the University of Toronto, or its equivalent from a recognized university, with a minimum mid-B average in the final year.

Program Requirements
• Students specializing in Biostatistics may choose a course-only or thesis program. See the Web site for details.
  o Full-time students can complete the program in 12 months.
  o Part-time students have a maximum of five years to complete the program.

Master of Science in Community Health

Minimum Admission Requirements
• An undergraduate degree 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 either a public health, community, or clinical practitioner.
• Some fields (i.e., FCM, PHN, and WPC) require appropriate certification/licensure in a regulated health profession and may require a valid license to practice in Canada or the student's home jurisdiction.
• A Diploma in Community Health may be awarded in exceptional circumstances to students who have completed 70% of the program requirements.

Program Requirements
• The MScCH is a course-work only program which requires the completion of 5.0 full course equivalents (FCE), including 0.5 FCE of a core Public Health Sciences subject; 0.5 to 1.0 FCE in supervised field placements or practica.
• The specific program requirements, course sequenc-es, and options vary by field of specialization; they are fully outlined on the Web site.
• Students can complete the program in 12 months of intensive full-time study or over a maximum period of 5 years of part-time study.

Courses
Core Courses
CHL 5004H Introduction to Public Health Sciences

Biostatistics and Demography
CHL 5201H Introductory Biostatistics for Students in Biological Sciences I
CHL 5202H Introductory Biostatistics for Students in Biological Sciences II
CHL 5203H Public Health Research Methods
CHL 5204H Survey Methods in Health Sciences II
CHL 5205H Demography and Vital Statistics I
CHL 5206H Demography and Vital Statistics II
CHL 5207Y Laboratory in Statistical Design and Analysis
CHL 5208Y Advanced Laboratory in Statistical Design and Analysis
CHL 5209H Survival Analysis I
CHL 5210H Categorical Data Analysis
CHL 5211H Demographic Analysis
CHL 5220H Community Health Appraisal Methods I
CHL 5221H Community Health Appraisal Methods II
CHL 5222H Longitudinal Data Analysis
CHL 5223H Applied Bayesian Methods
CHL 5224H Statistical Genetics
CHL 5225H Advanced Statistical Methods for Clinical Trials
Degree Programs

Public Health Sciences

**Community Nutrition**
Courses offered by the Department of Nutritional Sciences

- **CHL 5250H** Special Topics in Biostatistics
- **CHL 5251H** Survival Analysis II

**Courses offered by the Department of Nutritional Sciences**

- **NFS 1201H** Public Health Nutrition
- **NFS 1204Y** Master’s Seminars in Nutritional Sciences (Credit/No Credit)
- **NFS 1208H** Field Observation and Nutrition Program Laboratory I
- **NFS 1209H** Field Observation and Nutrition Program Laboratory II
- **NFS 1211H** Community Nutrition
- **NFS 1216H** Selected Topics in Nutrition
- **NFS 1218H** Recent Advances in Nutritional Sciences I
- **NFS 1219H** Recent Advances in Nutritional Sciences II
- **NFS 1220H** Clinical Nutrition
- **NFS 1221H** Nutrition Programs and Strategies
- **NFS 1484H** Advanced Nutrition

**Epidemiology**

- **CHL 5401H** Epidemiologic Methods I
- **CHL 5402H** Epidemiologic Methods II
- **CHL 5403H** Epidemiology of Non-communicable Diseases
- **CHL 5404H** Research Methods I
- **CHL 5405H** Assessment of Community Health Needs
- **CHL 5406H** Quantitative Methods for Biomedical Research
- **CHL 5407H** Categorical Data Analysis for Epidemiologic Studies
- **CHL 5408H** Research Methods II
- **CHL 5409H** Cancer Epidemiology
- **CHL 5410H** Occupational Epidemiology
- **CHL 5411H** International Health
- **CHL 5412H** Communicable Disease Epidemiology I: Principles
- **CHL 5413H** Public Health Sanitation
- **CHL 5414H** Additional Topics in Epidemiology of Non-communicable Diseases
- **CHL 5415H** Communicable Disease Epidemiology II: Practice
- **CHL 5416H** Environmental Epidemiology
- **CHL 5417H** Tobacco and Health: From Cells to Society
- **CHL 5418H** Scientific Overview in Epidemiology
- **CHL 5419H** Empirical Perspectives on Social Organization and Health
- **CHL 5420H** Global Health Research
- **CHL 5421H** Aboriginal Health
- **CHL 5422H** Applied Epidemiology and Public Health Policy
- **CHL 5423H** Doctoral Series in Epidemiology
- **CHL 5424H** Advanced Quantitative Methods in Epidemiology
- **CHL 5450H** Special Topics in Epidemiology

*Courses which may continue over a program. The course is graded when completed.*

**Family Medicine**

- **CHL 5601H** Teaching Evidence-Based Family Medicine in the Clinical Setting
- **CHL 5602H** Working with Families in Family Medicine
- **CHL 5603Y** Social, Political, and Scientific Issues in Family Medicine
- **CHL 5604H** Human Development Issues for Family Medicine
- **CHL 5605H** Research Issues in Family Medicine/Primary Care
- **CHL 5606H** Research in Family Medicine/Primary Care Methodological Applications
- **CHL 5607H** Teaching and Learning by the Health Professions: Principles and Theory
- **CHL 5608H** Teaching and Learning by the Health Professions: Practice and Approaches
- **CHL 5609H** Continuing Education in the Health Professions
- **CHL 5610H** Theory and Practice of Behaviour Change in Health Professional Settings
- **CHL 5611H** Continuing Education Planning, Management and Evaluation in the Health Professions
- **CHL 5630Y** Wound Prevention and Care

**Global Health**

- **CHL 5700H** Global Public Health
- **CHL 5702H** History of International Health
- **CHL 5703H** Urban Epidemics

**Health Promotion**

- **CHL 5801H** Health Promotion
- **CHL 5802H** Planning in Health Promotion and Population Health
- **CHL 5803H** Health Promotion Strategies
- **CHL 5804H** Health Behaviour Change
- **CHL 5805H** Critical Issues in Health Promotion Practice
- **CHL 5806H** Health Promotion Practice Field Inquiry
- **JXP 5807H** Health Communications

**Occupational and Environmental Health**

- **CHL 5902H** Advanced Occupational Hygiene
- **CHL 5903H** Environmental Health
- **CHL 5904H** Perspectives in Occupational Health and Safety—Legal and Social Context
- **CHL 5905H** Advanced Clinical Studies in Occupational Medicine
- **CHL 5906H** Organization and Management of Occupational Health Services
- **CHL 5907H** Radiological Health
- **CHL 5910H** Occupational and Environmental Hygiene I
- **CHL 5911H** Occupational and Environmental Hygiene II
- **CHL 5912H** Industrial Toxicology
- **CHL 5914H** Physical Agents I—Noise
- **CHL 5915H** Control of Occupational Hazards
- **CHL 5916H** Environmental Health Policy
- **CHL 5917H** Concepts in Safety Management
- **CHL 5918H** Biological Hazards in the Workplace and Community
- **CHL 5950H** Special Topics in Occupational and Environmental Health
Degree Programs

Public Health Sciences

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Public Health Policy
CHL 5300H Public Health Policy

Social and Behavioral Health Sciences
CHL 5101H Social Theory and Health
CHL 5102H Social and Political Forces in Health
CHL 5103H Sociology of Health in Canada
CHL 5104H Health Psychology
CHL 5105H Social Determinants of Health
CHL 5106H Health and Illness Behaviour in Children and Adolescents
CHL 5108H Work and Well-Being
CHL 5109H Gender and Health
CHL 5110H Theory and Practice of Program Evaluation
CHL 5111H Qualitative Research Methods
CHL 5112H Community Development in Health
CHL 5113H Health and Culture: Meeting the Needs of a Multicultural Society
CHL 5114H Social Science Perspectives on Mental Health
CHL 5115H Qualitative Analysis and Interpretation
CHL 5116H Public Policies to Improve Health
CHL 5117H A Global Perspective on the Health of Women and Children
CHL 5118H International Health, Human Rights, and Peace-Building
CHL 5119H Social and Political Perspectives on Drugs and Addiction
CHL 5120H Population Health Perspectives on Mental Health and Addictions
CHL 5121H Genomics, Bioethics and Public Policy
CHL 5122H Qualitative Research Practice (Credit/No Credit)
CHL 5123H Issues in the Transdisciplinary Research and the Health of Marginalized Population
CHL 5124H Public Health Ethics
CHL 5150H Social Science Research

Practica and Related Courses
CHL 5690H MSc CH Required Practicum (Credit/No Credit)
CHL 5691H MSc CH Optional Practicum (Credit/No Credit)
CHL 6010Y+ Required MHSc Practicum (Credit/No Credit)
CHL 6011H+ Required Practicum Extension (Credit/No Credit)
CHL 6020Y+ Optional MHSc Practicum (Credit/No Credit)
CHL 6021H+ Optional Practicum Extension (Credit/No Credit)
CHL 6022Y+ Long Extension to Optional Practicum (Credit/No Credit)

Reading Courses and Research Projects
CHL 7001H Directed Reading in an Approved Field of Community Health
CHL 7002H Approved Research Project in an Approved Field of Community Health

Collaborative Program Courses

Addiction Studies
CHL 5417H Tobacco and Health: From Cells to Society
PAS 3700H Multidisciplinary Aspects of Addiction Studies
PAS 3701H Advanced Research Issues in Addictions

Aging and the Life Course
AGE 2000H Social Determinants of Aging and Health
AGE 2500H Research Topics in Aging and the Life Course
AGE 3000H Advanced Research Seminar in Aging and the Life Course

Graduate Faculty

Full Members
Sharon Abel - BSc, MA, PhD
Kenneth Allison - BSc, BPHE, MHSc, MSc, PhD
Gavin John Andrews - BA, PhD
Elizabeth Badley - BSc, MSc, DPhil, PhD
Joseph Beitchman - MD
Solomon Benatar - MBChB, FRCP
Arlene Bierman - BA, MD, MS
Anne-Emanuelle Birn - BA, MA, DSc
Susan Bondy - PhD
Norman Boyd - MD, FRCP(C), The Lau Family Chair in Breast Cancer Research
Shelley Bull - BMath, MMath, PhD
Liviana Calzavara - BA, MA, PhD
David Cassidy - BSc, DC, MSc, PhD, Dr Med Sc
Catherine Chalin Clark - BSN, MA, PhD, MDiv
Joanna Cohen - BSc, MHSc, PhD
Angela Colantonio - BA, BSc, MHSc, PhD
Donald Cole - BSc, MSc, MD
Mary Corey - BA, MSc, PhD
Paul Corey - BSc, MA, PhD
Pierre Cote - PhD, MSc
Cheryl Cott - Dip(PT), BPT, DipGer, MSc, PhD
Michelle Cotterchio - BSc, MS, MPH, PhD
Michael Cusimano - MHPE, MD, FRCS(C)
Abdallah Daar - DPhil, FRCP(Lond), FRCS, FRCS(C)
Miriam Diamond - MSc, PhD
Joan Eakin - BA, MA, PhD
Gillian Einstein - PhD
Michael Escobar - BS, PhD
Michael Evans - BSc, MSc, PhD
Gail Eyssen - BSc, MSc, PhD
Bruce Ferguson - BA, MA, PhD
Roberta Ferrence - BA, MA, PhD
Lorraine Ferris - BA, MA, PhD
Benedikt Fischer - BA, MA, PhD
Bonnie Fox - AB, PhD
John Frank - BSc, MD, CCFP, MSc, FRCP(C)
Denise Gastaldo - BScN, MA, PhD
Monique Gignac - BSc, MA, PhD
Richard Glazier - MPH, MD
Vivek Goel - MD, CM, MSc, SM, FRCP(C)

*Extended course. For academic reasons, course work is extended into session following academic session in which course is offered.
Michael Stephen Goodstadt - BA, PhD
Bart Harvey - BA, MD, MSc, FRCP(C), FACP, PhD
Sheilah Hogg-Johnson - BSc, BM, MM, PhD
D Linn Holness - MHSc, MD
Alejandro Jadad - MD, PhD, FRCP(C)
Keith Knight - BSc, MS, PhD
Nancy Kreiger - BA, MPH, MPHIL, PhD
James Leary - BA, BSc, MSc, PhD
James Leake - MSc, DDS, DDPH, FRCD(C)
Wendy Levinson
Wen-Yi Wendy Lou - PhD
Rhonda Love - BA, MA, PhD
Heather Maclean - BSc, MSc, DipNutr, EdD
Robert Mann - BA, MA, PhD
Loraine Marrett - BBA, MSc, PhD
Peggy Mcdonough - BSc, BScN, MSc, PhD
Patricia McKeever - BN, MSc(A), PhD
John Ross Mclaughlin - BSc, MSc, MD
Margaret Millson - BSc, MHSc, MD, FRCP(C)
Salomon Minkin - BSc, MSc, PhD
Carles Muntaner - MD, PhD
Cameron Mustard - AB, ScD
Ted Myers - BA, MSc, MSW, PhD
Steven Narod - BSc, MD, FRCP(C)
C. David Naylor - MD, DPhil, FRCP(C)
Radford Neal - BSc, MSc, MD
Arnold Noyek - MD, FRCS
d
Patricia O'Campo - PhD
Elizabeth Peter-Hardtke - MSc, PhD
Blake Polan - BA, MA, PhD
Helene Polataiko-Howell - BOT, MEd, PhD, OT(C)
James Purdham - BSc, PhD
Janet Raboud - BM, MSc, PhD
Susan Rappolt - BSc(OT), MSc, PhD
Jurgen Rehm - PhD
Nancy Reid - BM, MSc, PhD, FRSC
Robert Remis - BSc, MD, MPH
Ann Robertson - BSc, DPH, PhD
Walter Rossier - MD
Brian Rush - PhD
Isaac Zakonfsky - MB, CB, FRCP(C)
Andrea Sass-Kortasak - BSc, MHSc, PhD
Margaret Schneider - BA, MA, PhD
Daniel Sellen - BA, MA, PhD, CRC
Brian Shaw - PhD
Frances Silverman - BSc, MSc, PhD
Eric Single - BA, PhD
Harvey Skinner - BA, MA, PhD
James Stafford - BSc, MSc, PhD
David Streiner - BA, MS, PhD, CPsych
Carol Strike - PhD
Lei Sun - BSc, PhD
Valerie Tarasuk - BA, BEd, BASc, MSc, PhD
Susan Tarlo - MBBS, MRCCP, FRCP(C)
Lorne Tepperman - BA, MA, PhD
Scott Thomas - BSc, MSc, PhD
C. David Naylor - MD, DPhil, FRCP(C)
Bristol To - BSc, MS, PhD
George Tomlinson - BSc, MSc, PhD
David Tichy - BA, MS, ScD
Mary Vachon - RN, PhD
Mariana Valverde - BA, MA, PhD, FRSC
Blair Wheaton - BA, MA, PhD
Andrew William - BA, BEd, MSc, PhD
Kue Young - BSc, MD, MSc, PhD, FRCP(C), LMCC
David Zakus - BSc, MSc, MSc, PhD
Stanley Zlotkin - BSc, MD, PhD, FRCP(C)

Members Emeriti
David Andrews - BSc, MSc, PhD, Fellow ASA
Mary Jane Ashley - MSc, MD, DPH
Robin Bagley - MA, PhD
Cornelia Baines - BA, BSW, MSW, PhD, MD
Mary Chipman - BSc, MA
E Alleen Clarke - MB, BS, MSc
David Coburn - BA, MD, PhD
David Hewitt - MA
Merrijoy Kelner - PhD
William Leriche - MD
Victor Marshall - BA, MA, PhD
Anthony Miller - MD
Richard Osborn
Irving Rootman - BA, MPH, PhD
Chandrakant Shah - MBBS, DCH, MRCGP, FRCP
Blossom Wignor - BA, PhD

Associate Members
Thomas Abernathy - BS, MSc, PhD
Edward Adlif - BA, MA, PhD
Farah Ahmad
Mathieu Albert - BA, MSc, PhD
Janet Angus - RN, BScN, MSc, PhD
Peter Austin - BSc, MSc, PhD
Peri Ballantine - BA, MA, PhD
Anna Banerji - MD, FRACP
Maria Barrera - MA, PhD
HeLEN Batty - MD, MDC, MEd, FCFP
Kim Bercovitz - BPE, MSc, PhD
Joseph Beyene - BSc, MSc, PhD
Rose Bilotta - BSc, MHSc, MD, CCFP, FRACP
Malcolm Binns
Anna Bortolus - MSC
Marie Boutilier-Dean - BA, MA, PhD
Katherine Mary Boydell - BA, MHSc, PhD
Paul Bozek - BASc, MBA, MEng, PhD
Curtis Breslin - BA, MA, PhD
Joan Brewster - BA, MA, PhD
Laurent Briollais - PhD
Patrick Brown - PhD
Lisa Butler - PhD
John Cairney - PhD
Russell Callaghan - PhD
Kent Campbell - BSc, PhD
Monica Campbell - BSc, MSc, PhD
Lissa Ceolin - MHSc
Angela Cheung - BA, MD, PhD, FRCP(C)
Anna Maria Chiarelli - BSc, MHSc, PhD
Kathryn Church - BA, MA, PhD
David Davis - BA, MD, FCFP, CCFP
Shelley Deeks - MD, MSc, FRCP(C)
Karim Dominc - BA, CPH, MSc

(Leader of Graduate Studies)
Degree Programs

Weizhen Dong - MA, PhD
Ian Drummond - PhD
Janice Du Mont - BA, MEd, EdD
James Dunn - BA, MA, PhD
Janet Durbin - MSc
Richard Edwards - BES, MES, PhD
Michael Finkelstein
Ann Fox - BAA, MHSc
Renee-Louise Franche - BA, MA, PhD
Laurie Fraser - BSc, MSc, CCPE
Risa Freeman - BSc, MEd, MD
France Gagnon - MSc, PhD
Michael Gardam - MD
Dionne Gesink Law
Abbas Ghavam-Rassoul - MD
Brian Gibson - BA, MA, MD, CCFP, MHSc, FRCP(C)
Norman Giesbrecht - PhD
David Gorman - BSc, PhD, DIH
Effie Gournis - MPH
Ross Eric Gray - BA, MA, PhD
Lois Green - PhD
Celia Greenwood - PhD
Helene Gregoire - PhD
Allan Grill - MD
Elizabeth Hall - MB, BCh, MSc, MFMHP
Curtis Handford
Shelley Harris - MSc, PhD
Trevor Hart
James Heller - BSc, MASc, PhD, DECH
Frederik Hendriks - BSA
Larry Hersfield - PhD
Eric Holowaty - MD, MSc, FRCPC
H Roland Hosein - BSc, MSc, PhD
Ronald House - BSc, MSc, MD, FRCPC
Rayjean Hung
Stephen Hwang - MD, MPH, FRCPC
Ziauddin Hyder - MBBS, MPS, PhD
Brian Hyndman - MHSc
Marilyn Irvine - BA, MPhil, PhD
Suzanne Jackson - BSc, MSc, PhD
Suzanne Jackson - PhD
Susan Jaglal - BSc, MSc, PhD
Prabhat Jha - DPhil, MD
Ian Lindsay Johnson - BSc, MD, MSc, FRCPC
Christopher Justice - PhD
Grazena Kalabis - BSc, PhD
Stephen Katz - BA, MA, PhD
Jennifer Keelan - PhD
Sue Keller-Olaman - PhD
Tanya Khan
Akawtu Khenti - MA
Lori Kieler - BA, MD, MHSc
Vicki Kirsh - PhD
Julia Knight - PhD
Pia Kontos - MA, PhD
Murray Krahn - BA, MSc, MD, FRCPC
Irene Kudla - CIH, HBSc, MHSc
Rafal Kustra - PhD
Scott Leatherdale - PhD
Shirley Lee - MHSc, MD, CCFP
Nancy Lightfoot - BSc, MSc, PhD
Angela Li-Muller - PhD
Gary Liis - MD
Geffrey Liu - MD, MSc
Gina Lockwood
Ellen MacEachen - PhD
Margaret MacNeill - BPHE, MA, PhD
William Magee - BA, MS, PhD
Rebecca Malik - MD, MHSc
Douglas Manuel - MD, MHSc
Dawn Martin - BA,MA
Robin Mason - BA, MA, MsED, PhD
Allison McGeer - BSc, MSc, MD, FRCP(C)
Robert McQuillan - BASc, MA
Gail McVey - BA, MA, PhD
Rosemary Meier - MB, ChB, MSc, FRCPsych, FRCPsych
Rahim Moineddin - PhD
Linda Muzzin - BA, MA, MA, PhD
I. Gary Naglie - BSc, MDCM, FRCP(C), ABM
Cynthia Nathanson - BA, MSW
Peter Nicoll
Stephanie Nixon - BHSc(PT), BA, MSc, PhD
Liana Nolan - MHSc, MD
Cameron Norman - PhD
Marianne Olifer - BScN, MHSc
Tony Panzarella - BSc, MSc
Andrew Paterson - BS, MBBCh
Jennifer Payne - BSc, MSc, PhD
Victoria Pennick - BSN
Gaylene Pron - BSc, MSc, PhD
Michael Rachlis - MD, MSc
Savithiri Ratnapalan
Elizabeth Rea - MD
Anne Rhodes - BScN, MSc, PhD
Denyse Richardson-Gerek
Diane Riley - BA, MA, PhD
Paul Ritvo - BA, MA, PhD
Robin Room - BA, MA, PhD
Yehudah Roth - MD
I.D. Rusen - MD
Robbie Schwartz - MSW
Robert Schwartz - PhD
Fran Scott - BSc, MSc, MD, LMCC, CCFP, FRCPC
James Scott - PhD
Peter Selby - MD
Martin Shain - BA, DIPCrim, MA, SJ L
R. Gary Sibbald - MD
Jerome Singh - BA, LLB, LLM, PhD, MHSc
Lesbia Smith - MD
Janet Smylie - MPH
Derek Stephens - BSc, MSc
Terrence Sullivan - BSc, MA, PhD
Richard Summerbell
Heather Sykes - BSc, PGCE, MEd, PhD
Nathan Taback - MSc, PhD
Yves Talbot - MD
Susan Tamblyn - DPH, MD
Alison Thompson - BA, MA, PhD
Kevin Thorpe - MMATH
Halla Thorsteinsdottir - PhD
Emile Tompa - BA, MA, PhD Economics
Ross Edward Upshur - MA, MD, MSc, FRCP(C)

352  Public Health Sciences
Degree Programs

Paul Villeneuve - BMath, MSc, PhD
Paul White - BSc, MA, MBA, CPE
Cornelia Wieman - MD
Wei Xu - PhD
Qi-Long Yi - MSc
Karen Yoshida - BPhE, BSc(PT), MSc, PhD
Lilian Yuan - MSc, DHA, MD, FRCP(C)
Martin Zack - PhD
Degree Programs

Public Policy and Governance  PPG

Faculty Affiliation
Arts and Science

Degree Programs Offered
Public Policy and Governance - MPP

Overview
An interdisciplinary program is offered by the School of Public Policy and Governance leading to a Master of Public Policy degree. The program provides professional education in two fields of specialization: Social and Economic Policy (domestic) and Global Public Policy.

The MPP is offered as a 20-month program featuring core instruction on a small-group, cohort-based model. In addition to the core of material considered essential for policy practice, students take elective courses within either of the two fields of specialization, each of which cuts across critical policy sectors such as health, education, cities, and the environment. Integrating seminars are led by faculty members. Invited visiting public sector leaders and external researchers bridge theory and practice, providing contact with senior professionals in government and the broader public, private, and community sectors. The program also provides access to courses and research facilities available in many other graduate departments, centres, and institutes across the University.

Contact and Address
Web: www.publicpolicy.utoronto.ca
E-mail: public.policy@utoronto.ca
Telephone: (416) 978 5120
Fax: (416) 978 5079

School of Public Policy and Governance
University of Toronto
Canadiana Building
Third floor, 14 Queen’s Park Crescent West
Toronto, Ontario  M5S 3K9
Canada

Degree Programs

Master of Public Policy

Minimum Admission Requirements

• Four-year University of Toronto bachelor’s degree with at least an overall B+ standing in the final year, or its equivalent from a recognized university, is required for admission to the 20-month program.

• Program is open to applicants of all disciplinary backgrounds. A basic competency in mathematics and a basic understanding of the Canadian political system are assumed. Applicants without such preparation should consult with the program director. University-level courses in these areas are not required for admission.

Program Requirements

Students normally:

• Complete 8.0 Full Course Equivalents (FCE) including 6.0 FCE (see required core courses listed below)

• 2 FCE within one of two areas of specialization chosen from the list of electives offered by participating graduate units.

• PPG 2006Y (a mandatory internship) normally completed in the summer between first and second year or during the second year. The internship research report is graded on a credit/no-credit basis.

Courses

Required Core Courses
PPG 1000H Governance and Institutions
PPG 1001H The Policy Process
PPG 1002H Microeconomics for Policy Analysis
PPG 1003H Macroeconomics for Policy Analysis
PPG 1004H Quantitative Methods for Policy Analysis
PPG 1005H The Social Context of Policy-making
PPG 1007H Putting Policy into Action: Strategic Implementation of Public Objectives
PPG 2001H Integrating Seminars - Current Issues/Problems in Public Policy and Practice
PPG 2002H Integrating Seminars - Current Issues/Problems in Public Policy and Practice
PPG 2003H Integrating Seminars - Current Issues/Problems in Public Policy and Practice
FIS 1210H Information and Its Social Contexts
POL 2234H Globalization, Internationalization, and Public Policy

Elective Courses offered by the School of Public Policy and Governance
PPG 2010H Panel Methods for Public Policy Analysis
PPG 2011H Ethics of Public Administration
PPG 2012H Topics in Public Policy

Internship
PPG 2006Y  MPP Internship

Graduate Faculty

Full Members
Geoff Anderson - BSc, MD, MSc, PhD
Michael Baker - BCom, MA, PhD, Royal Bank Chair in Public and Economic Policy
Dwayne Benjamin - BSc, MA, PhD
Philip Byer - SB, SM, PhD, PEng
David Cameron - MSc, BA, PhD
Michael Carter - BMath, MMath, PhD
Peter C Coyte - BA, MA, PhD
Morley Gunderson - BA, MA, PhD, Canadian Imperial Bank of Commerce (CIBC) Chair in Youth Employment
Rodney Haddow - BA, MScEcon, PhD
Randall Hansen - BA, MPhil, DPhil, Canada Research Chair
Bryan Karney - BASc, MEng, PhD, PEng
Heather MacLean - BASc, MBA, MSc, PhD, PEng
Eric Miller - BASc, MASc, PhD, Bahen/Tanenbaum Professor
John Myles - BA, BT, MA, PhD, FRCS, Canada Research Chair
Neil Nevitte - BA, MA, PhD
Phillip Oreopoulos - BA, MA, PhD
James Pesando - BA, MA, PhD
Douglas Reeve - BSc, MASc, PhD, PEng, FCIC, FTAPPI, FIAWS, DTech
Jeffrey Reitz - BS, PhD, FRSC, Robert F Harney Professor of Ethnic Immigration and Pluralism Studies
Richard Simeon - BA, MA, PhD
Michael Smart - BA, MA, PhD
Lorne Sossin - BA, MA, LLB, PhD, LLM, JSD
Mark Stabile - BA, MA, PhD, Director School of Public Policy and Governance (Director)
Ingrid Stefanovic - BA, MA, PhD
Janice Stein - BA, MA, PhD, FRSC, University Professor, Belzberg Professor of Conflict Management and Negotiation
Michael Trebilcock - LLB, LLM, FRSC, University Professor
Graham White - BA, MA, PhD
Linda White - BA, MA, PhD
Melissa Williams - AB, AM, PhD
David Wolfe - BA, MA, PhD
Joseph Wong - BA, MA, PhD, Canada Research Chair

Associate Members
Sujit Choudhry - BSc, BA, LLB, LLM
David Grant Duff - BA, MA, LLB, LLM
Colleen Flood - BA, LLB, LLM, SJD
Andrew Green - BA, MA, LLB, LLM, JSD
Joseph Heath - BA, MA, PhD
Kenneth Leithwood - BA, BPE, MPE, PhD
Benjamin Levin - BA, MEd, PhD
Ito Peng - BA, BSW, MA, PhD
Michal Perlman - BA, MSc, PhD
Grace Skogstad - BA, MA, PhD
Phil (Triadafilos) Triadafilopoulos - BA, MA, PhD
Rehabilitation Science  REH

Faculty Affiliation
Medicine

Degree Programs Offered
Rehabilitation Science – MSc, PhD

Collaborative Programs Offered
Students in rehabilitation science may participate in any of the following collaborative programs:
1. Aging, Palliative and Supportive Care Across the Life Course, see p. 408
   • Rehabilitation Science, MSc, PhD
2. Biomedical Engineering, see p. 418
   • Rehabilitation Science, MSc, PhD
3. Cardiovascular Sciences, see p. 426
   • Rehabilitation Science, MSc, PhD
4. Health Care, Technology and Place, see p. 454
   • Rehabilitation Science, MSc, PhD
5. Health Services and Policy Research, see p. 456
   • Rehabilitation Science, MSc, PhD
6. Neuroscience, see p. 466
   • Rehabilitation Science, MSc, PhD

Overview
Rehabilitation Science is the systematic study of promoting, maintaining or restoring human function, mobility, occupation and well-being. Using basic and applied methods, the science is focused on phenomena at the level of the cell, 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.

By its very nature, rehabilitation science is multidisciplinary. The Graduate Department of Rehabilitation Science offers graduate programs leading to the degrees of Master of Science and Doctor of Philosophy. To capture the full breath of rehabilitation, the expertise of our faculty and the research of our students, Rehabilitation Science has identified five fields of study:
1. Movement Science
2. Occupational Science
3. Rehabilitation Health Services Studies
4. Rehabilitation Technology Sciences
5. Social and Cognitive Rehabilitation Sciences

Contact and Address
Web: www.utoronto.ca/gdrs
E-mail: rehab.science@utoronto.ca
Telephone: (416) 978-0300
Fax: (416) 946-8762
Doctor of Philosophy

Minimum Admission Requirements

- Appropriate University of Toronto MSc degree, or its equivalent from a recognized University with a minimum A- average or a MScOT or MScPT degree with a research component with a minimum of A- standing.
- 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.
  - successfully complete a qualifying examination within the first 18 months of the program.
- Applicants, whose first language is not English, must provide evidence of written and verbal proficiency in English by completing 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.
    - Computer-based TOEFL: 250 and 5 on the essay rating component.
    - Internet-based TOEFL (IBT): 100/120 and 22/30 on the writing and speaking sections.
  - Michigan English Language Assessment Battery (MELAB): 87
  - International English Language Testing System (IELTS): 7.5

Program Requirements

- A minimum of 2.0 full-course equivalent (FCE) as follows:
  - REH 3100H Advanced Rehabilitation Research Issues or equivalent (0.5 FCE)
  - An advanced research methods course. (0.5 FCE)
  - REH 3001Y Advanced Rehabilitation Presentation and Proceedings (1.0 FCE)
- A comprehensive examination with written and oral components.
- Complete and defend a thesis.
- Students may be required to take extra courses in addition to the degree requirements listed above.
- Students are expected to be on campus and participating full time until all program requirements are completed.

Courses

Since not all courses are offered each academic year, the department should be consulted each session as to course offerings.

- REH 1100H Theory and Research in Rehabilitation Science
- REH 1120H Research Methods for Rehabilitation Science
- REH 1130H Theory and Research in Occupational Science
- REH 1510H Disordered and Restorative Motor Control
- REH 1620H Methodological Issues in Research on Aging and Health
- REH 2000H Individual Reading and Research Course
- REH 2001Y* Rehabilitation Presentations and Proceedings (Credit/No Credit)
- REH 3001Y* Advanced Rehabilitation Presentation and Proceedings (Credit/No Credit)
- REH 3100H Advanced Rehabilitation Research Issues

Graduate Faculty

Full Members
Anne Agur - BSc, MSc, PhD
Elizabeth Badley - BSc, MSc, DPhil, PhD
Katherine Berg - BPT, BScPT, MSc, PhD (Chair)
Sandra Black - BSc, MD
Kathryn Ann Boschens - BA, MA, PhD
Dina Brooks - BScPT, MSc, PhD (Coordinator of Graduate Studies)
Heather Carnahan - BPE, MSc, PhD
Anne Carswell - Dip(OT), BSc, MSc, PhD
Tom Chau - BASc, MASc, PhD
Angela Colantonio - BA, BSc, MHSc, PhD
Cheryl Cott - Dip(PT), BPT, DipGer, MSc, PhD
Aileen Davis - BSc(PT), MSc, PhD
Geoffrey Fernie - BSc, PhD, PEng, CCE
John Frank - BSc, MD, CCP, MSc, FRCP(C)
Michael Iwama - BSc, BSc(OT), MSc, PhD
Susan Jaglal - BSc, MSc, PhD
Bonnie Kirsh - BSc(OT), MED, PhD
William McIlroy - BSc, MSc, PhD (Adjunct)
Alex Mihailidis - BASc, MASc, PhD, PEng
Morris Milner - BSc, PhD
Cameron Mustard - AB, ScD
Helene Polatajko-Howell - BOT, MED, PhD, OT(C)
Milos Popovic - MSc, MASc, PhD
Sue Rappolt - BSc(OT), MSc, PhD
Denise Reid - BSc(OT), MED, PhD
Rebecca Renwick - Dip(P&OT), BA, PhD
David Streiner - BA, MS, PhD, CPsych
Donald Stuss - BA, BPh, MA, PhD, University Professor
Scott Thomas - BSc, MSc, PhD

* Courses which may continue over a program. The course is credited when completed.
Degree Programs

Mary (Molly) Verrier - DipP&OT, MHSc
Karen Yoshida - BPhE, BSc(PT), MSc, PhD
Nancy Young - BSc(PT), MSc, PhD (Adjunct)

Members Emeriti
Judith Friedland - BA, Dip(P&OT), MA, PhD

Associate Members
Dorcas Beaton - BSc(OT), MSc, PhD
Debra Cameron - BSc(OT), MEd, PhD
Jill Cameron - BSc, MSc, PhD
Kent Campbell - BSc, PhD
Paul Comper - BA, MA, PhD, C Psych
Deirdre Dawson - BSc, MSc, PhD
Barbara Gibson - BN(PT), MSc, PhD
Roger Goldstein - MB, ChB, MRCP, FRCP(C), FCCP
Sherry Grace - BA MA PhD
Chantal Graveline - BSc(PT), MSc, PhD
Robin Green – BA, PhD, CPych
Michelle Keightley - BSc, MA, PhD
Clifford Klein - BA, MA, PhD
Michel Landry - BSc(PT), MSc(PT), PhD
Cindi Marie Morrisey - BSc, PhD
Stephanie Nixon - BHSc(PT), BA, MSc, PhD
Ethne Nussbaum - BSc(PT), MEd, PhD
Nancy Salbach - BSc(PT), MSc, PhD
Barbara Secker - BA, MA, PhD
Fraser Shein - BSc, MEng, PhD
Martin Steinbach - PhD
Sharon Switzer-Mcintyre - BPE, BSc(PT), MEd, PhD
Gary Teare - DVM, MSc, PhD
Karl Zabjek - BSc, MSc, PhD
Religion

Faculty Affiliation
Arts and Science

Degree Programs Offered
Religion – MA, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Bioethics, see p. 416
   • Religion, MA, PhD
2. Editing Medieval Texts, see p. 437
   • Religion, PhD
3. Environmental Studies, see p. 443
   • Religion, MA, PhD
4. Ethnic and Pluralism Studies, see p. 445
   • Religion, MA, PhD
5. International Relations, see p. 458
   • Religion, MA
6. Jewish Studies, see p. 460
   • Religion, PhD
7. South Asian Studies, see p. 471
   • Religion, MA, PhD
8. Women and Gender Studies, see p. 473
   • Religion, MA, PhD
9. Women's Health, see p. 478
   • Religion, MA, PhD

Overview
The Centre for the Study of Religion offers Master of Arts and Doctor of Philosophy programs for the study of religion and facilitates research and publication on religion. The Centre 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 Centre 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. At the doctoral level, from the point of admission onward, student programs must be matched with the expertise of at least three professors who help supervise the student's work. The Centre's Graduate Studies Handbook, available on the Web and from the Centre, gives full information on admissions and programs as well as the research and teaching interests of the faculty.

Contact and Address
Web: www.religion.utoronto.ca/
E-mail: religion.grad@utoronto.ca
Telephone: (416) 978-3057
Fax: (416) 978-1610

Centre for the Study of Religion
123 St. George Street
University of Toronto
Toronto, Ontario M5S 2E8
Canada

Degree Programs
Master of Arts

Minimum Admission Requirements
• Normally a four-year bachelor's degree with specialization in religion or a cognate discipline broadly equivalent to the University of Toronto's BA Specialist degree in religion, with at least B+ 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.

Program Requirements
• Courses. 4.0 full-course equivalents (FCE); included in the total are RLG 2000Y Major Research Paper and RLG 1200H,Y MA Method and Theory Workshop. An extended program requires additional courses, some of which may be at the undergraduate level. Satisfactory performance requires the completion of all course work 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.

Doctor of Philosophy

Minimum Admission Requirements
• Normally, completion of all requirements of the Centre's MA program, or a comparable program at another university, with an average of at least A- in course work and with no individual course falling below B.

Program Requirements
• Courses. A minimum of 3.0 full-course equivalents (FCE), including RLG 1000Y Method and Theory in the Study of Religion and at least 0.5 FCE outside the area of specialization. Students may be required to take more than 3.0 FCE if their preparation is considered deficient in a subject required for their program. Satisfactory performance requires the completion of all course work 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 modern scholarship and necessary source languages provided that at least one shall be a language of modern scholarship. The language
requirements must be fulfilled before writing the
general examinations.

- **General Examinations.** Upon completion of course
work, the language requirements, and the thesis pre-
proposal, the student’s supervisory committee will set
general examinations to assess the student’s readi-
ness for thesis research. The general examinations
must be completed during 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 an oral
examination.

- **Colloquium Presentation.** Once general examina-
tions are completed, PhD candidates are required to
participate at least once in the Centre for the Study
of Religion’s colloquium before undertaking their final
oral examination.

- **Final Oral Examination.** The supervisory com-
mittee should 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 those of the first two academic years
of a program.

**Courses**

Not all courses are offered every year. Please consult
the Centre’s Graduate Studies Handbook which lists the
courses the Centre will offer this year as well as those
cross-listed from other departments.

**Religion**

RLG 1000Y  Method and Theory in the Study of Religion
RLG 1200H,Y The MA Method and Theory Workshop
RLG 1500Y  Directed Reading
RLG 1501H  Directed Reading
RLG 1502H  Directed Reading
RLG 2000Y  Major Research Paper
RLG 2007H  Ethics, Society, and Technology
Theodicy
RLG 2012Y  Natural Law in Judaism and Christianity
RLG 2016H  Radical Evil: Religious, Philosophical and
Psychological Response
RLG 2018H  Religion and Bioethics
RLG 2019H  Religion and the Environment
RLG 2021H  Historiography of Religions
RLG 2025H  Critical Social Theory and Feminist
Religious Thought
RLG 2026H  Modernity, Postmodernity, and the Future
of Religion
RLG 2028H  Enemies of God: Religion and Violence in a
(Post) Modern Time
RLG 2037H  Religion, Medicine and Healing

RLG 2041Y  Biblical Interpretation: Its History and
Theory
RLG 2043Y  Studies in Jewish and Christian Liturgy to
the Seventh Century
RLG 2060H  Religion and Philosophy in the European
Enlightenment
RLG 2088H  The Birth of Anthropology and the study of
Primitive Religion
RLG 2089H  The Study of Non-Literate Religions in
Nineteenth- and Early Twentieth-Century
France
RLG 2090H  Topics in Psychology of Religion
RLG 3101H  Yahweh and Other Deities in Ancient Israel
RLG 3142H  The Book of Genesis
RLG 3143H  Hebraica
RLG 3144H  Isaiah and Prophecy in the Early Judaism
and Christianity
RLG 3201H  Topics in Christian Origins I
RLG 3202H  Topics in Christian Origins II
RLG 3205H  Early Christian Self-Definition and the
Separation from Judaism
RLG 3224Y  Early Eastern Christianity
RLG 3225Y  Early Churches in Cross-Cultural
Perspective
RLG 3228H  Social History of the Early Jesus
Movement
RLG 3232H  Sacred Space in the Christian Tradition
RLG 3230H  Topics in Comparative Theology
RLG 3235H  Liberation Theology: Examining the Work of
Gustavo Gutiérrez and Thomas Berry
RLG 3236H  Religious Pluralism and the Church
RLG 3237H  Religion and Social Reform in Canada
RLG 3243H  The Synoptic Problem
RLG 3244H  The Sayings Gospel Q: Text and Social
History
RLG 3248H  Gospel of John and the Jesus Traditions
RLG 3249H  Studies in the Synoptic Gospels
RLG 3250H  Heresy and Deviance in Early Christianity
RLG 3252H  The Letter of James and Early Christian
Wisdom
RLG 3255H  Aspects of Matthean Interpretation
RLG 3258H  Salvation as Liberation in Paul
RLG 3260H  Twentieth-Century Political Philosophy
within Christianity
RLG 3261H  Augustine, Aquinas, Lonergan
RLG 3265H  Christian Spirituality and Modern Culture
RLG 3270H  Christianity and Crisis in North America
RLG 3272H  Jews and Judaism in Christian Traditions
RLG 3446H  Causation, Movement and Time in
Buddhist Scholastic Debate
RLG 3448H  History of Sanskrit Buddhist Tantric
Literature
RLG 3450H  Buddhism and Science
RLG 3452H  The History and Historiography of
Buddhism
RLG 3454H,Y Readings in Tibetan Buddhism
RLG 3456H  Tantra in Tibet
RLG 3458H  Rhetoric and Discipline in Buddhist Studies
RLG 3460H  Basic Sanskrit Readings (1)
RLG 3461H  Basic Sanskrit Readings (2)
RLG 3500Y  Special Topics in Islamic Studies
### Degree Programs

#### Religion

- **RLG 3501H** Special Topics in Islamic Studies
- **RLG 3505H** Topics in Islamic Religious Literature
- **RLG 3510H** Studies in Islamic Thought and Spirituality
- **RLG 3512H** Introduction to Islamic Law
- **RLG 3514H** Ismaili History and Thought: The Persian Tradition
- **RLG 3520H** Disciplining Islam
- **RLG 3522H** Dreams, Visions and the Enlightenment
- **RLG 3611H** Topics in Rabbinic Midrash
- **RLG 3620H** Disciplining Islam
- **RLG 3622H** Maimonides and His Modern Interpreters
- **RLG 3623H** Philosophy, Theology, and Politics: The Thought of Leo Strauss
- **RLG 3624Y** The Jurisprudence of Maimonides
- **RLG 3631H** The Community of the Dead Sea Scrolls
- **RLG 3634H** Worship and Scripture at Qumran
- **RLG 3641H** Interpretations of Jewish Tradition
- **RLG 3645Y** The Jewish Legal Tradition
- **RLG 3647H** Early Rabbinic Judaism
- **RLG 3651H** Hellenistic-Jewish Thought
- **RLG 3653Y** Jewish Exegetical Traditions in Antiquity
- **RLG 3655H** Readings in Jewish Literature (200 BCE - 200 CE)
- **RLG 3661H** Judaism and Philosophy
- **RLG 3691H** Themes in Jewish Studies I
- **RLG 3692H** Themes in Jewish Studies II
- **RLG 3712H** Asceticism in the Hindu Tradition
- **RLG 3713Y** Hinduism and Politics
- **RLG 3721H** Ramayana in Literature, Theology and Political Imagination
- **RLG 3741H** Interpretations of Hindu Tradition
- **RLG 3743H** The Bhakti Tradition
- **RLG 3744H** Hindu Epics
- **RLG 3745H** Hindu Myths and Mythology
- **RLG 3762H** Religion and Aesthetics in South Asia
- **RLG 3764H** Readings in Sanskrit Philosophy
- **RLG 3930H** Religion in Canada Since 1867
- **RLG 3931H** Topics in North American Religions
- **RLG 3941Y** Celtic Mythology
- **RLG 3944H** Uses of the Bible in the Middle Ages
- **RLG 4000Y** Directed Reading: TST Seminar
- **RLG 4001H** Directed Reading: TST Seminar
- **RLG 4004H** Colloquium Presentation

#### Other Departments

- Students may take courses offered by other graduate units, including the following:

#### Anthropology

- **ANT 6003H** Critical Issues in Ethnography I
- **ANT 6004H** Critical Issues in Ethnography II

#### East Asian Studies

- **EAS 1223Y** Readings in Dharmasastra
- **EAS 1500H/Y** The Structure of the Classical Sanskrit Language (formerly EAS 2004Y Introduction to Sanskrit)
- **EAS 1501H** Intermediate Sanskrit Texts

- **EAS 1999Y** Seminar in East Asian Studies in Bibliography, Reference and Research Methodology

#### Ethnic and Pluralism Studies (Collaborative Program)

- **JTH 3000H** Coordinating Seminar in Ethnic and Pluralism Studies

#### History

- **HIS 1000H** Historiography
- **HIS 1006H** Historiography “From Below”: Critical and Comparative Perspectives
- **HIS 1201H** The Materials of Medieval History
- **HIS 1204H** The Life and Writings of Thomas Aquinas
- **HIS 1206H** Popular Religion in the Middle Ages
- **HIS 1207H** Pastoralia: The Medieval Literature of Pastoral Care
- **HIS 1208H** Writings of Robert Grosseteste
- **HIS 1211Y** History and Historiography in the Golden Legend
- **HIS 1213H** Medieval Institutes of Perfection
- **HIS 1221H** Topics in Early Modern Social History
- **HIS 1222H** Ritual in Renaissance and Early Modern Europe
- **HIS 1230H** The Sexes in the Western World, 1450-1650
- **HIS 1242H** Religion and Society in Europe, 1760-1914
- **HIS 1536H** Religion, Society, and Politics in Eighteenth- and Nineteenth-Century America
- **HIS 1537H** Society, Culture and Politics in the Early United States, 1780-1850
- **HIS 1674Y** Japanese Political Thought, 1868-Present
- **JHA 1690Y** Nationalism in India—Before and After Independence
- **HIS1709H** Conversion and Christianities in the Early Modern Spanish World

#### Italian Studies

- **ITA 1545H** The Sacra Rappresentazione

#### Law

- Participation in LAW courses is at the discretion of the Faculty of Law upon presentation, to the Faculty of Law Records Office, of a signed permission form from the student’s home department. Note that preference is given to JD students and that many law courses are full by the end of the Faculty of Law add/drop period.

- **LAW497H** Law, Religion and Public Discourse

#### Medieval Studies

- **MST 1210H** Judeo-Christian Koine Greek
- **MST 1212H** The Apocryphal Bible
- **MST 3010H** Augustine of Hippo
- **MST 3205H** Violence in Medieval Society
- **MST 3210H** Medieval Spain, 1000-1300
- **MST 3261H** Cluny in the Central Middle Ages
- **MST 3265H** Hagiographies and Methodologies
Degree Programs

**MST 3401H** Introduction to Medieval Christianity  
**MST 3405H** Early Christian Monasticism  
**MST 3415H** John Cassian and Early Monasticism in Gaul  
**MST 3425H** Eastern Christianity 325-1453CE

**Near and Middle Eastern Civilizations**  
**NMC 1305H** Early Hebrew Epigraphy  
**NMC 1311Y** Post-Biblical Hebrew: Mishnah and Midrashim  
**NMC 1324Y** Hebrew Legal Codes, Medieval and Modern  
**NMC 2050Y** Islam in Cross-Cultural Contact:  
Interreligious and Intercultural Encounters  
**NMC 2055H** The Qur'an and Its Interpretation  
**NMC 2056H** Reading in Qur'an and Tafsir  
**NMC 2090Y** Islamic History to the Fall of Baghdad  
**NMC 2112Y** Medieval Islamic Institutions  
**NMC 2119Y** Readings in Medieval Arabic Historical and Documentary Sources  
**NMC 2131H** Ethics and Education in Medieval Arabic Texts  
**NMC 2132Y** Hadith: Classical Religious Literature in Islam  
**NMC 2133H** Medieval Arabic Sources on Islamic Thought  
**NMC 2170H** Topics in Modern Arab History I  
**NMC 2221Y** Medieval Persian Ethical and Advice Literature  
**NMC 2222Y** Persian Mystical Poetry

**Philosophy**  
**PHL 2015H** Confucianism  
**PHL 2016H** Taoism: Philosophy and Religion  
**PHL 2017H** Buddhism in China  
**PHL 2020H** Augustine  
**PHL 2030H** Aquinas  
**PHL 2032H** Seminar in Aquinas  
**PHL 2090H** Hermeneutics  
**PHL 2099H** Bernard Lonergan  
**PHL 2119H** Philosophical Foundations of Multidisciplinary Studies  
**PHL 2140H** Feminist Philosophy  
**PHL 2144H** Seminar in Social Philosophy  
**PHL 2146H** Topics in Bioethics  
**JVP 2147H** Environmental Philosophy  
**PHL 2151H** Aesthetics  
**PHL 2181H** Philosophy of Religion

**Sociology**  
**SOC 6018H** Sociology of Religion I  
**SOC 6118H** Sociology of Religion II  
**SOC 6201H** Sociological Theory III—Theory and Method in Historical Sociology

**Graduate Faculty**

**Full Members**  
L Jane Abray - BA, MA, MPh, PhD  
Phyllis Airhart - BA, MA, PhD  
Joseph Bryant - BA, MA, PhD  
Janice Boddy, BA, MA, PHD  
Michael Cobb, BA, MA, AM, PHD  
Isabelle Cochelein - BSc, BA, MA, DAE, PhD  
Hilary Cunningham - BA, MA, PhD  
Arti Dhand - BA, MA, PhD  
James DiCenzo - BA, MA, PhD  
Terence Donaldson - BSc, MRel, ThM, ThD  
Ann Dooley - BA, MA, PhD  
Konrad Eisenbichler - BA, MA, PhD  
Anver Emon - BA, JD, MA, LLM, PhD  
Nicholas Everett, BA, MA, PhD  
Mohammad Fadel, BA, JD, PHD  
Harry Fox - BA, BSc, MA, MS, PhD  
Paul Franks, AB, MA, PHD  
Frances Garrett, BA, MA, PHD  
Robert Gibbs - BA, MA, PhD  
Gillian Gillison - BA, PhD  
Joseph Goering - BA, MAR, MA, MSL, PhD  
Willi Goetschel - LicPhil, PhD  
Paul William Gooch - BA, MA, PhD  
Kenneth Green - BA, MA, PhD  
Amir Harrak - MA, PhD  
Marsha Hewitt - BA, MA, MA, PhD  
Chehvanyakam Kanaganayakam - BA, PhD  
Malavika Kasturi, DPHIL  
Mark Kingwell - BA, MLitt, PhD  
Juri Kivimae, AM, PHD  
Pamela Klassen - BA, MA, MPhil, PhD (Director of Graduate Studies)  
John Kloppenborg - BA, MA, PhD (Chair)  
Michael Lamberk, BA, MA, PHD  
Todd Lawson, BA, MA, PHD  
John Magee, BA, MA, PHD  
John Marshall, MA, PHD  
Mark McGowan - BA, MA, PhD  
Neil McMullin, BA, STB, MTH, PHD  
Sariana Metso, PHD  
Mark Meyerson - BA, MA, PHD  
Kenneth Mills - BA, MA, DPhil  
Andrea Most, BA, MA, PHD  
Amy Mullin - BA, PhD  
Heather Murray - BA, MA, PhD  
Hindy Najman - BA, MA, PhD  
Judith Newman - AB, MARI, PHD  
Linda Northrup - BA, MA, PhD  
David Novak - AB, MHL, rabbinical diploma, PHD  
James Reilly - BA, MA, PhD  
Walid Saleh - BA, MA, PhD  
Stella Sandahl - MA, DES, PHD  
Lawrence Schmidt - BA, MA, PhD  
Vincent Tsing-song Shen - BA, MA, PhD, Lee Chair  
Robert Sinkewicz - BA, AM, MDIV, DPhil  
Ingrid Stefanovic - BA, MA, PHD  
Maria Subtelny - BA, PHD  
Glen Taylor - BA, MTh, MPhil, PhD

362 Religion
Degree Programs

Nicholas Terpstra - BA, MA, PhD
Leif Vaage - BA, MDiv, PhD
Shafique Virani, PHD

Members Emeriti
John Brownlee - BA, MA, MPh
William Callahan - AB, MA, PhD
Alan Davies - BA, BD, STM, PhD
C. Thomas McIntire, PHD
Graeme Nicholson, BA, BD, MA, PHD
Joseph O’Connell - BA, MA, PhD
Roger O’Toole, DIPED, BA, MA, PHD
G Peter Richardson - Bar, BD, PhD
Brian Stock - AB, PhD
Joseph Michael Vertin - BA, STB, STL, MA, PhD

Associate Members
Juhn Ahn - BA, MA, PhD
Andreas Bendlin, PHD
Christoph Emmrich - BA, MA, PhD
Yiftach Fehige, MA, PHD
Jennifer Harris - BA, MA, PhD
Abraham Khan - BS, BD, MA, PhD
Reid Locklin - BA, MTS, PhD
Amira Mittermaier - MA, PhD
Enrico Raffaelli, PHD
Ajay Rao - BA, MA, MA, PhD
Stephen Scharper - BA, MA, PhD
Degree Programs

Slavic Languages and Literatures  SLA

Faculty Affiliation
Arts and Science

Degree Programs Offered
Slavic Languages and Literatures – MA, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Jewish Studies, see p. 460
   • Slavic Languages and Literatures, PhD

Overview
The Graduate Department of Slavic Languages and Literatures offers instruction leading to two degrees – Master of Arts and Doctor of Philosophy – in one of the broadest ranges of Slavic languages and literatures available in a North American university. The following subjects are offered as both major and minor fields: Croatian and Serbian Languages and Literatures, Czech and Slovak Languages and Literatures, Polish Language and Literature, Russian Language and Literature, Slavic Linguistics, and Ukrainian Language and Literature.

Contact and Address
Department of Slavic Languages and Literatures
Room 431, 121 St. Joseph Street
Alumni Hall
St. Michael's College
University of Toronto
Toronto, Ontario M5S 1J4
Canada

Web: www.utoronto.ca/slavic/
E-mail: slavic@chass.utoronto.ca
Telephone: (416) 926-2075
Fax: (416) 926-2076

Degree Programs

Master of Arts

Minimum Admission Requirements
• Undergraduate degree, equivalent to a four-year program (preferably in a cognate area) at the University of Toronto, with an overall standing equivalent to at least a mid-B in the final year.
• A minimum A- average in all third and fourth year Slavic subjects taken is recommended.

Program Requirements
• Proficiency in language of major must be demonstrated during first week of session. Undergraduate language courses may be required. These are not tabulated as part of graduate program course requirements.
• Students normally complete:
  o 4.0 full course equivalents (FCE) including SLA1104H and SLA1040H, OR
  o 3.0 FCE including SLA1104H and SLA1040H; plus a research paper written in English.
• All MA students are required to take SLA 1104H Introduction to Old Church Slavonic or present evidence to the Department that an equivalent course has been completed elsewhere.
• Students majoring in one of the Slavic languages and literatures must have acquired a working knowledge (equivalent to a first-year language course) of a second Slavic language (most often Russian) or have completed, by the end of their program, an approved undergraduate course in a Slavic language that is different than their major language of study. A final grade of B or better is required in all language courses.
• Students who intend to major or minor in Slavic linguistics must take SLA 1109H.

Doctor of Philosophy

Minimum Admission Requirements
• Appropriate University of Toronto master’s degree, or its equivalent, with a minimum A- average in graduate courses and demonstrated research competence.

Program Requirements
Students are normally required to:
• Complete a major and a minor program.
• Complete 9.0 full course equivalents (FCE) with at least 0.5 FCE in Slavic linguistics. Advanced standing to a maximum of 3.0 FCE may be available for work completed in the MA.
• Minor programs should include 2.0 FCE from any one of Croatian and Serbian Languages and Literatures, Czech and Slovak Languages and Literatures, Polish Language and Literature, Russian Language and Literature, Slavic Linguistics, and Ukrainian Language and Literature OR, with departmental approval, from a cognate discipline (e.g., Cinema Studies, Comparative Literature, Drama, History, Philosophy).
• Maintain a minimum annual average of A- to continue in the PhD program. Poor performance in one session (below a B average) may result in the termination of a student’s PhD eligibility.
• Acquire a working knowledge of a Slavic language other than their major language of study OR complete at least two approved undergraduate courses in a Slavic language that is different than their major language of study. A working knowledge is defined as proficiency equivalent to a second year course. Students must also satisfy departmental requirements for their major language. Students who do...
Degree Programs

Slavic Languages and Literatures

not major in Russian most often choose it as their second Slavic language.

• Demonstrate a reading knowledge of French or German.
• Pass written comprehensive examinations in the major field and written and oral comprehensive examinations in the special field. The major field exam cannot be taken if students have any outstanding course work.
• Dissertation.
• In years 1 and 2, students must take courses and be on campus full-time to participate fully in the PhD program’s activities.
• Complete all program requirements, including the thesis, within five years of initial registration.

Slavic Linguistics Specific Program Requirements

Within the PhD program requirements listed above, students studying Slavic linguistics should include:

• at least 3.0 FCE in Slavic linguistics; as well as 2.0 FCE in theoretical linguistics from cognate disciplines, e.g., linguistics, anthropology. Linguistics students are also strongly advised to complete 1.0 FCE in the literature of their major language.
• Complete at least one course in Slavic languages from each of the three groups: West Slavic, East Slavic, and South Slavic by the end of their second year.

Courses

Not all courses are offered every year. Students should consult the departmental handbook for current course offerings.

Croatian and Serbian Literatures

SLA 1507H Modern Croatian Bards in Performance
SLA 1517H Modern Serbian Bards: the Orphic Tradition
SLA 1520Y Bosnia in Literature and Culture: Between Croats and Serbs
SLA 1522Y Eros, Trauma and the Dark Identity: Desexualizing the Modern Serbian Novel
SLA 1537H Political Drama from Dubrovnik to Danube
SLA 1547H South Slavic Folklore

Czech and Slovak Literature

SLA 1600Y Introduction to Czech and Slovak Literatures
SLA 1601Y Journeys and Home in Modern Czech Fiction
SLA 1602Y Czech Style and Syntax
SLA 1603H Lifting the Iron Curtain: Czech Culture of the Sixties in Context
SLA 1604Y History of Czech Verbal Art from the Early Stages to Baroque
SLA 1605Y Of Robots, Clowns and Poets: Modern Czech Drama and Theatre
SLA 1606H Public Places and Private Spaces in Czech Short Story
SLA 1608H On the Wave of the Avant-garde

Hungarian Literature

HUN 1440 Y The Modern Hungarian Novel
HUN 1450H Hungarian Drama
HUN 1451H Three Hungarian Film Directors

Polish Literature

SLA 1304H Staging God, Man and History: Polish Drama
SLA 1305H Polish Fiction or a Disrupted Funeral of the Novel
SLA 1306H Polish Poetry: Shaping the National Canon
SLA 1308Y Topics in Polish Literature
SLA 1312Y Modernism and Post-Modernism in Polish Literature
SLA 1331H Imagining “The Other” in Polish Literature and Culture

Russian Literature

SLA 1202H Gulag Literature
SLA 1203H The Self and Other in Russian Prose
SLA 1204H Contemporary Russian Literature
SLA 1205H Russian Literary Scandals
SLA 1207H The Imaginary Jew
SLA 1210H Studies in Medieval Russian Literature
SLA 1211Y Studies in the Russian Drama: Eighteenth to Twentieth Century
SLA 1215H Studies in Russian Literature and Criticism in the Eighteenth Century
SLA 1216H From English to Russian Literature and Back
SLA 1220H Nineteenth Century Russian Thinkers
SLA 1226H Dostoevsky in Literary Theory and Criticism
SLA 1228H Themes in Russian Realism
SLA 1231H Twentieth Century Russian Prose I
SLA 1232H Russian Symbolism
SLA 1233H Studies in Modern Russian Poets
SLA 1234H Dostoevsky
SLA 1235H Pasternak
SLA 1236H Pushkin
SLA 1237H Twentieth Century Russian Prose II
SLA 1238H Chekhov
SLA 1239H Vladimir Nabokov’s American Novels
SLA 1240H Tolstoy
SLA 1411H Experiments in Art in the Late Russian Empire—Early Soviet Union
SLA 1900H Russian Nineteenth-Century Poetry (mandatory for MA students)

Slavic Linguistics

SLA 1040H Methods of Teaching Slavic Languages
SLA 1101Y History of the Russian Language
SLA 1102Y Advanced Russian Language Skills
SLA 1103H Comparative South Slavic Linguistics
SLA 1104H Introduction to Old Church Slavonic
SLA 1105Y Structure of Russian
SLA 1107H Comparative West Slavic Linguistics
SLA 1108H Slavic Dialectology
SLA 1109H Studies in Old Church Slavonic

COL 5039H Of Laughter and Forgetting in Milan Kundera

Hungarian Literature

HUN 1440 Y The Modern Hungarian Novel
HUN 1450H Hungarian Drama
HUN 1451H Three Hungarian Film Directors

Polish Literature

SLA 1304H Staging God, Man and History: Polish Drama
SLA 1305H Polish Fiction or a Disrupted Funeral of the Novel
SLA 1306H Polish Poetry: Shaping the National Canon
SLA 1308Y Topics in Polish Literature
SLA 1312Y Modernism and Post-Modernism in Polish Literature
SLA 1331H Imagining “The Other” in Polish Literature and Culture

Russian Literature

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SLA 1203H The Self and Other in Russian Prose
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SLA 1239H Vladimir Nabokov’s American Novels
SLA 1240H Tolstoy
SLA 1411H Experiments in Art in the Late Russian Empire—Early Soviet Union
SLA 1900H Russian Nineteenth-Century Poetry (mandatory for MA students)
Degree Programs

SLA 1110H Comparative Historical Slavic Linguistics
SLA 1112H Tense, Aspect and Mood in Slavic
SLA 1113H Language Standardization and the Politics of Identity in Southeastern Europe
SLA 1141H History of the Ukrainian Language
SLA 1142H Style and Structure of Ukrainian
SLA 1150H Russian Since the Revolution
SLA 1161H Areal Linguistics

Russian Language
SLA 1101Y History of the Russian Language
SLA 1102Y Advanced Russian Language Skills

Ukrainian Literature/Language
SLA 1141H History of Ukrainian Language
SLA 1142H Style and Structure of Ukrainian
SLA 1402Y Studies in Ukrainian Modernism
SLA 1403Y Studies in Contemporary Ukrainian Literature
SLA 1404Y Studies in Ukrainian Poets
SLA 1405Y Experiments in Ukrainian Prose
SLA 1406Y Studies in Ukrainian Literary Criticism
SLA 1407H Aspects of Literary Translation of Ukrainian
SLA 1408H Taras Shevchenko
SLA 1409H Ukrainian Literature of the Seventeenth and Eighteenth Centuries
SLA 1412Y Literature of the Ukrainian Diaspora

General Slavic
SLA 1037H Theatre and Cinema in Extremis: Staging Twentieth Century Aesthetics and Politics
SLA 1038H Performance in Theory and Practice
SLA 1039H Kyiv-Kiev-Kijow: A City through Cultures and Centuries
SLA 1040H Methods of Teaching Slavic Languages
SLA 1207H The Imaginary Jew
SLA 1310H Theatre in the Twentieth Century
SLA 1421H Women in East European Fiction
SLA 1521H Post-Modernity and the Mythopoetic Legacy of Mitteleuropa
SLA 2000Y Reading and Research
SLA 2001H One Term Reading and Research
SLA 2002Y Reading and Research (for PhD students only)
SLA 2020Y Research Paper
COL 5012Y Readings in Czech/Russian Literary Theory
COL 5037H Magic Prague: Question of Literary Cityscapes

Graduate Faculty

Full Members
Veronika Ambros - BA, MA, PhD
Christopher Barnes - BA, MA, PhD
Ralph Bogert - BA, MA, PhD
Taras Koznarsky - MA, PhD
Christina Kramer - BA, MA, PhD (Chair)
Leonid Livak
Donna Orwin - BA, MA, PhD
Joseph Schallert - BA, MA, MA, PhD
Maxim Tarnawsky - BA, PhD
Tamara Trojanowska - BA, MA, PhD (Coordinator of Graduate Studies)
Borje Vahamaki - BA, MA, MA, PhLic, PhD, Docent

Members Emeriti
Charles Bedford - BA, MA, PhD
George Bisztray - PhD
Lubomir Dolezel - BA, MA, PhD, FRSC
Louis Iribarne - BA, MA, PhD
Kenneth Lantz - BA, MA, PhD
Ralph Lindheim - BA, MA
Nicolaie Pavliuc - BA, MA, PhD
Constantin Ponomareff - BA, MA, PhD
Roger Thomson - BA, MA, DPhil

Associate Members
Julia Mikhailova
Thomas Allan Smith
Social Work  SWK

Faculty Affiliation
Social Work

Degree Programs Offered
Social Work
MSW
Combined JD/MSW in Law and Social Work
Combined MHSc/MSW in Health Administration and Social Work
PhD

Diploma Programs Offered
Social Work - Advanced Diploma in Social Service Administration (pending approval)

Collaborative Programs Offered
Social Work students can apply to the following collaborative programs. For complete details, see separate entries within the Collaborative Program section of this calendar.

1. Addiction Studies, see p. 406
   • Social Work, MSW, PhD
2. Aging, Palliative and Supportive Care Across the Life Course, see p. 408
   • Social Work, MSW, JD/MSW, MHSc/MSW, PhD
3. Asia Pacific Studies, see p. 413
   • Social Work, MSW
4. Bioethics, see p. 416
   • Social Work, MSW, PhD
5. Community Development, see p. 428
   • Social Work, MSW
6. Ethnic and Pluralism Studies, see p. 445
   • Social Work, MSW, PhD
7. Health Care, Technology and Place, see p. 454
   • Social Work, PhD
8. Health Services and Policy Research, see p. 456
   • Social Work, MSW, PhD
9. Sexual Diversity Studies, see p. 469
   • Social Work, MSW, PhD
10. Women and Gender Studies, see p. 473
    • Social Work, MSW, JD/MSW, MHSc/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 more than 90 years. The Faculty offers a professional/academic program of study leading to a Master of Social Work (MSW), a post-master’s Advanced Diploma in Social Service Administration and a Doctor of Philosophy (PhD) degree.

The MSW Program is distinguished by the integration of research and practice in both the classroom and its practicum education. The program offers five areas of specialization: 1) children and their families; 2) mental health and health; 3) diversity and social justice; 4) gerontology; and 5) social service administration. It is fully accredited by the Canadian Association of Social Work Education.

The Advanced Diploma in Social Service Administration program provides a rigorous, comprehensive grounding in the key values, skills, and knowledge required by administrators and leaders of social service organizations. The Diploma Program is pending final approval.

The 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.

Contact and Address
Web: www.socialwork.utoronto.ca
E-mail: admissions.fsw@utoronto.ca
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Factor-Inwentash Faculty of Social Work
246 Bloor Street West
University of Toronto
Toronto, Ontario M5S 1A1
Canada

Degree Programs

Master of Social Work
The Factor-Inwentash Faculty of Social Work offers two streams in the Master of Social Work Program:

1. Students with a four-year bachelor’s degree from a recognized university will normally complete the program in two years of full-time study.
2. Students entering with a B.S.W. degree from a recognized university will be given advanced standing and will normally complete the program in one year of full-time study or two years of part-time study.

All students are expected to graduate with an advanced level of knowledge and professional competence in a chosen area of social work practice.

Minimum Admission Requirements
• Applicants with a four-year University of Toronto bachelor’s degree with a minimum mid-B average in the final year of full-time study, or its equivalent from a recognized university are admitted to a two-year MSW program. 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 M.S.W. Program with Advanced Standing.
• Students applying to the Social Service Administration specialization must have at least 5 years experience in social services.
• Course work should have included 3.0 full-course equivalents (FCE) in Social Science courses, including 0.5 FCE in research methodology. A mid-B is strongly recommended in the research methodology course.
• Experience and knowledge in social services and critical social issues, as well as suitability is considered.
• Proof of English Facility (see SGS General Regulations).
• Advanced Standing applicants must also choose an area of specialization.

Due to space limitations, applicants holding the minimum admission requirements are not guaranteed admission. The Faculty reserves the right to admit qualified applicants to the program. All admission decisions are final.

Program Requirements

MSW Two-Year Program

Within the two-year full-time program, except for the Gerontology Specialization (see below), students are required to:

• Complete 8.5 full-course equivalents (FCE) including 7.5 required FCE and 1.0 elective FCE
• Thesis option: (for students enrolled in Children and their Families, Diversity and Social Justice, and Mental Health and Health Specializations) complete 8.0 FCE plus thesis (1.0 FCE) and a 0.5 FCE research methods course (SWK 6307H or SWK 6308H). Students who have a minimum of two years of prior full-time social work experience are eligible to apply for substitution of two elective 0.5 FCE in place of the full-credit SWK4702Y. Workplace supervision must have occurred with a MSW supervisor. Requests for substitution must be reviewed and approved by the Faculty-Assessment Committee. The thesis option is available to a limited number of students, whose proposed research must be approved by the Associate Dean and a review panel. Students who choose the thesis option may require additional time to complete the program.
• Satisfy SGS residency and full-time student requirements. All MSW degrees must be completed within four years from the date of first registration in the program.

Within the two-year full-time program, Gerontology Specialization, students are required to:

• Complete 9.0 FCE, including 8.0 required FCE and 1.0 elective FCE. All students enrolled in the Social Work and Gerontology specialization will automatically be enrolled in the Collaborative Program in Aging, Palliative and Supportive Care Across the Life Course.
• Thesis option: students enrolled in the Gerontology specialization complete 8.0 FCE, plus the thesis (1.0 FCE).

Courses

Year One

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWK 4102H</td>
<td>Social Policy and Social Welfare in the Canadian Context</td>
</tr>
<tr>
<td>SWK 4103H</td>
<td>Elements of Social Work Practice</td>
</tr>
<tr>
<td>SWK 4105H</td>
<td>Social Work Practice Laboratory</td>
</tr>
<tr>
<td>SWK 4107H</td>
<td>Foundations of Social Work: Knowledge, Theory and Values that Inform Practice</td>
</tr>
<tr>
<td>SWK 4510H</td>
<td>Research for Evidence-Based Social Work Practice (SWK 4510H is a prerequisite for all second year required courses.)</td>
</tr>
<tr>
<td>SWK 4602H</td>
<td>Social Work Practice with Groups</td>
</tr>
<tr>
<td>SWK 4605H</td>
<td>Social Work Practice with Individuals and Families</td>
</tr>
<tr>
<td>SWK 4654H</td>
<td>Social Work Practice in Organizations and Communities</td>
</tr>
<tr>
<td>SWK 4701H</td>
<td>Social Work Practicum I (SWK 4103H and SWK 4105H are prerequisites)</td>
</tr>
</tbody>
</table>

Year Two

Students choose one of the following five specializations:

Specialization: Children and their Families

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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</thead>
<tbody>
<tr>
<td>SWK 4514H</td>
<td>Research for Practice with Children and their Families</td>
</tr>
<tr>
<td>SWK 4608H</td>
<td>Social Work Practice with Families</td>
</tr>
<tr>
<td>SWK 4620H</td>
<td>Social Work Practice with Children and Adolescents</td>
</tr>
<tr>
<td>SWK 4625H</td>
<td>Contemporary Issues in Working with Children and their Families</td>
</tr>
<tr>
<td>SWK 4702Y</td>
<td>Social Work Practicum II (full-credit)</td>
</tr>
</tbody>
</table>

Specialization: Diversity and Social Justice

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWK 4304H</td>
<td>Globalization and Trans-nationalization: Social Work Responses Locally and Globally</td>
</tr>
<tr>
<td>SWK 4306H</td>
<td>Process of Social Exclusion, Marginalization, and Resistance</td>
</tr>
<tr>
<td>SWK 4512H</td>
<td>Creating Knowledge to Inform Critical Practice</td>
</tr>
<tr>
<td>SWK 4606H</td>
<td>Diversity, Access, and Equity in Social Work Practice</td>
</tr>
<tr>
<td>SWK 4702Y</td>
<td>Social Work Practicum II (full-credit)</td>
</tr>
</tbody>
</table>

Specialization: Mental Health and Health

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWK 4412H</td>
<td>The Context of Mental Health and Health Practice</td>
</tr>
<tr>
<td>SWK 4511H</td>
<td>Practice-Based Research in Mental Health and Health</td>
</tr>
<tr>
<td>SWK 4702Y</td>
<td>Social Work Practicum II (full-credit)</td>
</tr>
</tbody>
</table>

Plus students can then elect to take one of three choices:
• SWK 4622H Social Work Practice in Health followed by SWK 4604H Social Work Practice in Mental Health
• SWK 4622H Social Work Practice in Health followed by SWK 4632H Advanced Social Work Practice in Health (Prerequisite: SWK 4622H)
• SWK 4604H Social Work Practice in Mental Health followed by SWK 4631H Advanced Social Work Practice in Mental Health (Prerequisite: SWK 4604H)

Specialization: Social Service Administration (commences September 2009 pending approval)
SWK 4425H Leadership Skills in Social Service Organizations
SWK 4426H Financial Management of Social Service Organizations
SWK 4427H Human Resource Management in Social Service Organizations
SWK 4515H Research and Quality Improvement in Human Service Organizations
SWK 4702Y Social Work Practicum II (full-credit) 1.0 elective FCE

Specialization: Social Work in Gerontology
AGE 2000H Principles of Aging
SWK 4513H Knowledge Building in Social Work
SWK 4612Y Social Work and Aging: Integrated Policy and Practice (full-credit)
SWK 4618H Special Issues in Gerontological Social Work
SWK 4702Y Social Work Practicum II (full-credit) 1.0 elective FCE

MSW Program with Advanced Standing

Within the MSW program with advanced standing, except for the Gerontology Specialization (see below), students normally will:
• Complete a total of 4.5 full-course equivalents (FCE), including 2.5 required FCE and 1.0 elective FCE.
• Participate in a practicum equivalent to 1.0 FCE.
• Complete program requirements as full-time students (three academic sessions) or part-time students (normally within six academic sessions). Part-time students are required to complete the same number of credits as full-time students, although the structure and sequencing of their individual programs of study may vary.

• Thesis option: Students enrolled in Children and their Families, Diversity and Social Justice, and Mental Health and Health specializations complete a total of 5.0 FCE, including 3.5 required FCE plus thesis (1.0 FCE) plus 0.5 FCE research methods course (SWK 6307H or SWK 6308H).
• Students who have a minimum of two years of prior full-time social work experience are eligible to apply for substitution of two elective 0.5 FCE in place of the 1.0 FCE SWK 4702Y. Workplace supervision must have taken place with a MSW supervisor. Requests for substitution must be reviewed and approved by the Faculty-Assessment Committee. The thesis option is available to a limited number of students, whose proposed research must be approved by the Associate Dean and a review panel. Students who choose the thesis option may require additional time to complete the program.

Within the MSW program with advanced standing, Gerontology Specialization, students normally will:
• Complete 5.0 FCE. All students enrolled in the Social Work and Gerontology specialization will automatically be enrolled in the Collaborative Program in Aging, Palliative and Supportive Care Across the Life Course.

• Thesis option: Students enrolled in the Gerontology specialization complete 4.0 FCE, plus the thesis (1.0 FCE).

Courses
Students complete one of the following five specializations:

Specialization: Children and their Families
SWK 4510H Research for Evidence-Based Social Work Practice (SWK 4510H is a prerequisite for all second year required courses)
SWK 4514H Research for Practice with Children and their Families
SWK 4608H Social Work Practice with Families
SWK 4620H Social Work Practice with Children and Adolescents
SWK 4625H Contemporary Issues in Working with Children and their Families
SWK 4702Y Social Work Practicum II (full-credit) 1.0 elective FCE

Specialization: Diversity and Social Justice
SWK 4304H Globalization and Trans-nationalization: Social Work Responses Locally and Globally
SWK 4306H Process of Social Exclusion, Marginalization, and Resistance
SWK 4510H Research for Evidence-Based Social Work Practice (SWK 4510H is a prerequisite for all second year required courses)
SWK 4512H Creating Knowledge to inform Critical Practice
SWK 4606H Diversity, Access, and Equity in Social Work Practice
SWK 4702Y Social Work Practicum II (full-credit) 1.0 elective FCE

Specialization: Mental Health and Health
SWK 4412H The Context of Mental Health and Health Practice
SWK 4510H Research for Evidence-Based Social Work Practice (SWK 4510H is a prerequisite for all second year required courses)
SWK 4511H  Practice-Based Research in Mental Health and Health
SWK 4702Y Social Work Practicum II (full-credit)
1.0 elective FCE
Plus students can then elect to take one of three choices:
- SWK 4622H Social Work Practice in Health and SWK 4604H Social Work Practice in Mental Health
- SWK 4622H Social Work Practice in Health followed by SWK 4632H Advanced Social Work Practice in Health (Prerequisite: SWK 4622H)
- SWK 4604H Social Work Practice in Mental Health followed by SWK 4631H Advanced Social Work Practice in Mental Health (Prerequisite: SWK 4604H)

Specialization: Social Service Administration (pending approval)
SWK 4425H Leadership Skills in Social Service Organizations
SWK 4426H Financial Management of Social Service Organizations
SWK 4427H Human Resource Management in Social Service Organizations
SWK 4515H Research and Quality Improvement in Human Service Organizations
SWK 4102H Social Policy and Social Welfare in the Canadian Context
SWK 4510H Research for Evidence-Based Social Work Practice
SWK 4702Y Social Work Practicum II (full-credit)
0.5 elective FCE

Specialization: Social Work in Gerontology
AGE 2000H Principles of Aging
SWK 4510H Research for Evidence-Based Social Work Practice (SWK 4510H is a prerequisite for all second year required courses)
SWK 4513H Knowledge Building in Social Work
SWK 4612Y Social Work and Aging: Integrated Policy and Practice (full-credit)
SWK 4618H Special Issues in Gerontological Social Work
SWK 4702Y Social Work Practicum II (full-credit)
1.0 elective FCE, of which 0.5 FCE must be from the Collaborative Program in Aging, Palliative and Supportive Care Across the Life Course listing.

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 Website www.socialwork.utoronto.ca.

AGE 2000H Principles of Aging
JXP 1001H Parenting: Multidisciplinary Perspectives
JFS 1460H Community-Based Natural Resource Management
JPW 2118H Philosophical Foundations of Women's Studies
JTH 3000H Coordinating Seminar in Ethnic and Pluralism Studies

PAS 3700H Multidisciplinary Aspects of Addiction Studies
SWK 4210H Promoting Empowerment: Working at the Margins
SWK 4403H Women and Social Policy in Canada
SWK 4417H Adolescence: Social Work Challenges and the Role of Social Work
SWK 4418H Introduction to Jewish Perspectives on Caring
SWK 4420H Human Rights and Social Justice
SWK 4422H Social Housing and Homelessness
SWK 4506H Applied Quantitative Data Analysis
SWK 4603H Advanced Social Work Practice with Groups (Prerequisite: SWK 4602H or equivalent)
SWK 4609H Sexuality, Sexual Diversity and Social Work Practice
SWK 4610H Advanced Social Work Practice with Couples
SWK 4613H Social Work Practice with the Aged
SWK 4616H Drug Dependencies: Interventive Approaches
SWK 4617H Cross-Cultural Social Work Practice
SWK 4619H Family Mediation: Theory and Practice
SWK 4621H Integrative Child and Adolescent Therapy: Theory and Practice
SWK 4623H Violence in Families: Multilevel Intervention in Interdisciplinary Practice
SWK 4624H Feminist Social Work Practice
SWK 4630H Intersecting Narratives: Self, Culture, Institutions
SWK 4658H Social Work with Immigrants and Refugees
SWK 4662H Social Policy Analysis
SWK 4664H Administrative/Managerial Practice in Social Work
SWK 4667H Information Technology in Professional Social Work Practice
SWK 4668H Welfare of Children: Policy and 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.

SWK 4801H Special Studies I
SWK 4802H Special Studies II
SWK 4803H Special Studies III
SWK 4804H Special Studies IV
Combined JD/MSW in Law and Social Work

Minimum Admission Requirements
• Applicants must satisfy the admission requirements of both the Juris Doctor and Master of Social Work programs independently.

Program Requirements
• Program requirements will normally be satisfied within four years. Advanced Standing for students with a BSW from a recognized university is possible.

Combined MHSc/MSW in Health Administration and Social Work

Minimum Admission Requirements
• Students must satisfy the admission requirements for both the Master of Health Science and Master of Social Work programs independently.

Program Requirements
• Program requirements will normally be satisfied within three years. Advanced Standing for students with a BSW from a recognized university is possible.

Doctor of Philosophy

Minimum Admission Requirements
• Master of Social Work degree or an equivalent master’s degree with at least B+ standing from an accredited program in a recognized university;
• competency in basic statistical methods at an introductory level;
• educational and professional experience that will indicate a capacity to undertake research-oriented postgraduate work;
• evidence of facility in the English language (See SGS General Regulations).

Program Requirements
Full-time Option
• Satisfy program requirements within six years of initial registration, including completing at least 5.0 full-course equivalents (FCE) generally within two years of registration.
• Complete the following required research FCE (each is equivalent to 0.5 FCE): SWK 6301H, SWK 6302H, SWK 6307H, SWK 6308H. Students may be exempt from these research courses but will substitute alternate elective courses for each exempted course. SWK4506H (0.5 FCE) is a prerequisite for SWK6301H or an equivalent competency exam must be passed by all incoming students with a grade of a least B+.
• 2.5 graduate level elective FCE, including at least one 0.5 FCE from Social Work and at least 0.5 FCE from another graduate unit and with the approval of the PhD Director.
• SWK 7000H Doctoral Thesis Seminar (0.5 FCE) is required during the fall session of the second year of the program.
• Following completion of course work, students are required to satisfactorily complete a comprehensive paper followed by a thesis proposal and thesis which constitutes a distinct contribution to knowledge in the field of social work and finally, an oral thesis defence.
• Students are expected to complete their course work, Comprehensive Paper, and have their thesis proposal approved by the end of August of the third year of the program. The research, writing, and oral examination of the thesis are typically completed by the end of the fifth year of the program.
• 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.

Flexible-time Option
• The flexible-time PhD differs only in design and delivery. All requirements are the same as those for the full-time PhD students.
• The flexible-time option is offered to practicing professionals who can demonstrate their employment or other professional work is related to their intended field of study and research interests. Students who are considering the flexible-time PhD should ensure that they will have adequate time on campus to attend classes and to fulfill the academic requirements of a PhD program.

Courses
SWK4506H Applied Quantitative Data Analysis
SWK 6005H Theoretical Foundations of Social Work
SWK 6006H Theory and Practice of Teaching Social Work
SWK 6101H Critical Evaluation of Social Work Practice Theories
SWK 6106H Family Mediation: Research and Practice
SWK 6203H Comparative Social Welfare Systems
SWK 6205H Social Planning in Social Welfare
SWK 6208H Advanced Principles of Social Policy Analysis
SWK 6301H Intermediate Statistics and Data Analysis (Prerequisite: SWK 4506H or pass a competency exam)
SWK 6302H Epistemology and Social Work Research
SWK 6307H Designing and Implementing Qualitative Social Work Research
SWK 6308H Designing and Implementing Quantitative Social Work Research
SWK 6401H Sociocultural Issues in Social Work
SWK 6406H Housing Theory and Research Methods
SWK 7000H Doctoral Thesis Seminar (Credit/No Credit)
Degree Programs

These courses are designed to provide seminars or tutorials according to the particular interests of students enrolled:

SWK 6501H,Y Special Studies 1
SWK 6502H,Y Special Studies 2
SWK 6503H,Y Special Studies 3
SWK 6504H,Y Special Studies 4

Diploma Programs

Advanced Diploma in Social Service Administration (pending approval)

The goal of this program is to provide a rigorous, comprehensive grounding in the key values, skills and knowledge required by administrators, managers and leaders of social service organizations. The diploma program is designed for students who are working full-time.

Admission Requirements

- Applicants follow admission requirements stipulated by the School of Graduate Studies at the University and by the Factor-Inwentash Faculty of Social Work. Applicants must have a MSW or master's degree in a related social service field and have at least five years experience in social services.

Program Requirements

- 3.0 full-course equivalents (FCE) offered in modular format one full day per month.
- Diploma requirements can be completed in one year (3 academic sessions) or on a part-time basis normally within two years (6 academic sessions). All students must complete the Diploma Program within a maximum five-year period.

Courses

- SWK 4425H Leadership Skills in Social Service Organizations
- SWK 4426H Financial Management of Social Service Organizations
- SWK 4427H Human Resource Management in Social Service Organizations
- SWK 4515H Research and Quality Improvement in Human Service Organizations
- 1.0 elective FCE given in conjunction with the M.S.W. curriculum or 0.5 elective FCE and a major paper addressing a funding, management, or structural challenge in a social service agency.

Graduate Faculty

Full Members

Ramona Ailagia - BA, MSW, PhD (Associate Dean, Academic)
Marion Bogo - BA, MSW, DASW, CSW
Adrienne Chambon - BA, MA, BSW, PhD (Director, PhD Program)
Anver Emon - BA, JD MA, LLM, PhD
Esme Fuller-Thomson - BA, BSW, MSW, PhD
Judith Globerman - BSW, MHCSc, MSc, PhD, CSW
J David Hulchanski - BA, MSc(Pl), PhD, MCIP, Chow Yei Ching Social Work Chair in Housing
Ernie Lightman - BA, MA, PhD
Robert MacFadden - BA, MSW, PhD, CSW
Lynn McDonald - BA, MSW, PhD
Faye Mishna - MSW, PhD, CSW (Associate Dean, Research)
Sheila Neysmith - BSc, MSW, DSW
Cheryl Regehr - BA, MSW, PhD, Sandra Rotman Chair in Social Work (Dean)
Wes Shera - BA, MA, PhD
Susan Stern - BA, MSW, PhD
Nicolas Trocme - BA, MSW, PhD
Ka Tat Tsang - BSc, MSW, MSocSc

Members Emeriti

Donald Bellamy - MSW, DSW
Margot Breton - BA, MSW
Ralph Garber - BA, MSW, DSW
Usa George - BEd, BSc, MA, MA, PhD, Royal Bank Chair in Applied Social Work Research
Howard Irving - BS, MSW, PhD
Norma Lang - MSW, PhD
Elsa Marziali - BA, MSW, PhD, Schipper Chair in Gerontological Social Work
Donald Meeks - MSW, PhD
Sidney Olyan - MSW, PhD
Benjamin Schlesinger - MSW, PhD
Ben Shapiro - MSW, PhD
Francis Turner - DSW, CSW
Lilian Wells - BA, BSW, MSW, DASW, CSW

Associate Members

Uzo Anucha - PhD, MSW, BSW
Rachel Birnbaum - BA, BSW, MSW, PhD
Christine (Cindy) Blakely - BA, MSW
David Brennan - BA, MSW, PhD
Shari Brotman - BA, MS, PhD
Lea Caragata - BA, MA, PhD
James Cullen - BA, BSW, MSW, PhD
Margaret Denton - PhD, MA, BA (Hons)
Peter Donahue - BSc, BA, MSW, PhD
Barbara Fallon - PHD, MSW, BA
Sheila Faucher - BA, MSW, PhD
Les Fleischer - BA, MSW, DSW
Robert Flynn - BA, BSc, MA, PhD
B. Michael Frolic - BA, PhD
Tahany Gadalla - BSc, MSc, EdD
Nora Gold - BA, MSW, PhD

372 Social Work
Degree Programs

Deborah Goodman - BA, MSW, DSW
Marilyn Herie - BA, MSW, PhD
Paul Heung - BA, MA
Abel Ickowicz - FRCP, MD
Joel Jeffries - MA, MB, BCH, BAO, FRCP, MRC PSY
John Langley - MD, LMCC
Vicki LeBlanc - PhD, MSc, BPs
Eunjung Lee - BSW, MSW, PhD
Deborah Levine
Becky Liddle - PHD, MED
Juliene Lipson - BS, MS, PHD
Andrea Litvack - BSW, MSW, CSW
Harriet MacMillan - MD, FRCP, MS
Sarah Maiter - BA, MSW, PHD
Susan McGrath - BA, MES, PHD
Ted McNeill - BA, MSW, PHD
Nick Mule - PHD, MSW, BA
Barbara Muskat - BSW, MSW, PhD
Ted Myers - BA, MSc, MSW, PhD
Peter Newman - BA, MSW, PHD
David Nicholas - BSW, MSW, PhD
Debra Pepler - BA, BEd MSc, PhD
Svetlana Popova - MD, MPH, PhD
Roxanne Power - BA, BSW, MSW
Paula Ravitz - BA, MD
Susan Reid - BASc, MA, PhD
Kenn Richard - BSW, MSW
Izumi Sakamoto - BA, MA, MSW, MS, PhD
Aron Shlonsky - BA, MSW, MPH, PhD, Director, Bell
Canada Child Welfare Centre
Kelsey Simons - BA, MSW, PhD
Christina Sinding - MA, PhD
Wayne Skinner - BA, MSW
Malcolm Stewart - BA, MSW, PhD
Kevin Stoddart - BA, MSW, PhD
Karen Swift - BA, MSW, PHD
Cynthia Wesley-Esquimaux - BA, MA, PhD
Charmaine Williams - BSc, BA, MSW, PhD
Degree Programs

Sociology  SOC

Faculty Affiliation
Arts and Science

Degree Programs Offered
Sociology – MA, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Addiction Studies, see p. 406
   • Sociology, MA, PhD
2. Aging, Palliative and Supportive Care Across the Life Course, see p. 408
   • Sociology, MA, PhD
3. Asia-Pacific Studies, see p. 413
   • Sociology, MA
4. Environmental Studies, see p. 443
   • Sociology, MA, PhD
5. Ethnic and Pluralism Studies, see p. 445
   • Sociology, MA, PhD
6. International Relations, see p. 458
   • Sociology, MA
7. Jewish Studies, see p. 460
   • Sociology, PhD
8. Knowledge Media Design, see p. 462
   • Sociology, MA, PhD
9. Women and Gender Studies, see p. 473
   • Sociology, MA, PhD

Overview
The Master of Arts program helps students develop their theoretical perspectives and research skills. It provides solid basic training in honing research skills for the public and private sectors. It also provides a strong foundation in sociological training for those who plan to pursue a doctoral degree in sociology. Students can choose to take the program on a part-time or full-time basis.

The Doctor of Philosophy program prepares students for careers in teaching and research. The program trains students to conduct theoretically informed and methodologically sophisticated state-of-the-art sociological research. Graduates will be able to conduct independent research and to communicate their research in a variety of contexts. Therefore, the program is designed to provide both a broad knowledge of the discipline and training in basic research. Students are expected to acquire autonomy in conducting research, preparing scholarly publications, and participating in professional conferences. These objectives are achieved through a combination of course work, participation in seminars, preparation of comprehensive examinations, paid work as research and teaching assistants, preparing papers for conference presentation, and supervised dissertation research.

Contact and Address
Web: know.soc.utoronto.ca/index.php
E-mail: sociology.dept@utoronto.ca
Telephone: (416) 978-3414
Fax: (416) 978-3963

Department of Sociology
University of Toronto
725 Spadina Avenue
Toronto, Ontario  M5S 2JH
Canada

Degree Programs

Master of Arts

Minimum Admission Requirements
• Four-year BA or its equivalent with 5.0 full-course equivalents (FCE) 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' on-line application, applicants must submit:
  o Two letters of reference from instructors or research supervisors;
  o A paper, including summary, which the student feels represents his or her best work;
  o A one-page typed statement of interest indicating research interests and reasons for applying to study Sociology at the University of Toronto.
• 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 facility in the English language through the successful completion of the Test of English as a Foreign Language (TOEFL) with scores of at least:
  o Paper-based TOEFL exam: 580 with 5 on the Test of Written English
  o Computer-based TOEFL exam: 237 with 5 on the essay rating component
  o Internet-based TOEFL exam: 93/120 with 22/30 on the writing and speaking sections.

Program Requirements
• Students have the option of completing the master's degree in one of two ways:
  o 8 half-courses within 9 months (the preferred option for those proceeding to the PhD) or
  o 6 half-courses and a research paper within 12 months.
• All master’s students must take: SOC 6001H Classical Sociological Theory, SOC 6302H Statistics for Sociologists, SOC 6712H Qualitative Methods I.
• The choice of courses in all programs must be approved by the Department. Students must maintain a B average to be recommended for the MA degree.
• The MA degree may be pursued on a full-time or part-time basis. Part-time students must complete the course requirements within five years from date of entry.

Doctor of Philosophy

Minimum Admission Requirements
• The normal requirement is completion of the MA or its equivalent, with at least an A- standing. All students must demonstrate that their MA, or equivalent, includes course work equivalent to Classical Social Theory, Social Statistics, and Qualitative Methods I. Some students may be required to take prescribed additional courses.
• The Department may recommend admission directly after completion of a four year BA 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’s on-line application form, applicants must submit:
  o Two letters of reference from instructors or research supervisors;
  o A paper, including summary, which the student feels represents his or her best work;
• A one-page typed statement of interest indicating research interests and reasons for applying Applicants who were educated outside Canada, whose primary language is not English if an additional language is deemed essential for satisfactory completion of research for the thesis.
• Students who enter the doctoral program directly from a four-year BA will be required to take the three half-courses that are required at the MA level in addition to the standard PhD requirements.
• Two years of residence.

Courses
For details on course offerings check with departmental Graduate Office.

Theory and Methods of Sociology—Core Courses
SOC 6001H Sociological Theory I
SOC 6101H Sociological Theory II
SOC 6201H Sociological Theory III
SOC 6301H Survey Methods
SOC 6302H Statistics for Sociologists
SOC 6303H Field Methods
SOC 6501H Research Design and Hypothesis Testing in Sociology
SOC 6502H The Sociology Curriculum
SOC 6707H Intermediate Data Analysis
SOC 6708H Advanced Data Analysis
SOC 6710H The Logic of Social Inquiry
SOC 6711Y Research Practicum
SOC 6712H Qualitative Methods I
SOC 6713H Qualitative Methods II
SOC 6714H Historical Methods Using Census Data
SOC 6715H Historical Sociology
SOC 6716H Survey Methods II—Longitudinal Surveys

Areas of Specialization

Immigration and Ethnicity
SOC 6002H Immigration I
SOC 6003H Immigration II
SOC 6009H Ethnicity I
SOC 6109H Ethnicity II

Health and Mental Health
SOC 6022H Sociology of Health
SOC 6023H Sociology of Mental Health I
SOC 6122H Sociology of Mental Health II
Degree Programs

SOC 6123H Sociology of Addiction
SOC 6126H The Social Ecology of Health

Networks and Community
SOC 6008H Network Analysis I
SOC 6108H Network Analysis II
SOC 6214H Sociology of Urbanization
SOC 6314H Community
SOC 6414H Urban Organization

Crime and Socio-Legal Studies
CRI 3140H Special Topics in Criminology
SOC 6006H Deviance I
SOC 6106H Deviance II
SOC 6206H The Sociology of Deviance and Control
SOC 6506H Design and Analysis of Research on Deviance and Control

Gender and Family
SOC 6017H Sociology of Families I
SOC 6117H Sociology of Families II
SOC 6019H Gender Relations I
SOC 6119H Gender Relations II

Stratification, Work, and Labour Markets
SOC 6012H Sociology of Work I
SOC 6112H Sociology of Work II
SOC 6013H Social Inequality I
SOC 6113H Social Inequality II
SOC 6312H Social Aspects of Technology and Work

Political Sociology
SOC 6005H Social Change and Development I
SOC 6105H Social Change and Development II
SOC 6010H Political Sociology I
SOC 6110H Political Sociology II
SOC 6014H Environmental Sociology I
SOC 6114H Environmental Sociology II
SOC 6125H Theories of Social Change

Other Courses
SOC 6016H Social Demography I
SOC 6116H Social Demography II
SOC 6018H Sociology of Religion I
SOC 6118H Sociology of Religion II
SOC 6021Y Sociology and the Policy Process in Canada
SOC 6124H The Life Course in Modern Society
SOC 6514H Social Ecology
SOC 6516H Sociology of Culture

Special Reading Courses
SOC 6015H A reading course or individual research in an approved field I
SOC 6115H A reading course or individual research in an approved field II

MA Research Paper
SOC 6215Y M. A. Research Paper

Graduate Faculty

Full Members
Robert Andersen - BA, MA, PhD
Zaheer Baber - PhD
Bernd Baldus - MA, DrScPol
Dean Behrens - HBA, MS, PhD
Marion Blute - BA, MA, PhD
Michal Bodemann - MA, PhD
Monica Boyd - BA, MA, PhD, FRSC, Canada Research Chair
David Brownfield - PhD
Joseph Bryant - BA, MA, PhD
Robert Brym - BA, MA, PhD
Liviana Calzavara - BA, MA, PhD
Margit Eichler - MA, LLD, PhD
Bonnie Erickson - BA, MA, PhD
Patricia Erickson - BA, MA, PhD
Eric Fong - BA, MA, PhD
Bonnie Fox - AB, PhD
Harriet Friedmann - AB, MA, PhD
Rosemary Gartner - BA, MS, PhD
Ronald Gillis - BA, MA, PhD
Kelly Hannah-Moffat - BA, MA, PhD
John Hannigan - BA, MA, PhD
Ping-Chun Hsiung - BA, MA, MA, PhD
Charles Jones - BA, MA, PhD
John Kervin - BA, PhD
Candace Kruttschnitt - BA, MA, MPhil, PhD
William Magee - BA, MS, PhD
Victor Marshall - BA, MA, PhD
John Myles - BA, BT, MA, PhD, FRCS, Canada Research Chair
Roger O'Toole - BA, PGCE, MA, PhD
Jeffrey Reitz - BS, PhD, FRSC, Robert F Harney Professor of Ethnic Immigration and Pluralism Studies
Richard Roman - BA, MA, PhD
Janet Salaff - BA, MA, PhD
Aysan Sev’er - BA, MA, PhD
Eric Single - BA, PhD
Ann Marie Sorenson - BA, MA, PhD
Julian Tanner - BSc, PGCE, MA, PhD
Judith Taylor - BA, PhD
Lorne Tupperman - BA, MA, PhD
Sheldon Ungar - BA, MA, PhD
Jack Veugelers - BA, MA, PhD
Barry Wellman - BA, MA, PhD
Sandy Welsh - BA, MA, PhD (Associate Chair, Graduate Studies)
Blair Wheaton - BA, MA, PhD (Chair)

Members Emeriti
Raymond Breton - MA, PhD, FRSC(SM)
Douglas Campbell - BA, MA, PhD
John Hagan - Emeritus, BA, MA, PhD, FRSC
Edward Harvey - BA, MA, PhD
Nancy Howell - BA, PhD
Wsevolod Isajiw - BA, MA, PhD
Dennis Magill - BA, MA, PhD
William Michelson - AB, AM, PhD, FRSC
Edward Silva - BA, MA, PhD
John Simpson - BA, BD, MTh, PhD
Metta Spencer - MA, PhD
Irving Zeitlin - BA, MA, PhD

Associate Members
Sara Abraham - BA, MA, PhD
Shyon Baumann - BA, MA, PhD
Brent Berry - BA, PhD
Cynthia Cranford - MA, PhD
Ronit Dinovitzer
Adam Green - BA, MA, MSS, PhD
Joseph Hermer - BA, MA, DPhil
Josee Johnston - BA, MA, PhD
Anna Korteweg - BA, MA, PHD
Patricia Landolt - BA, MA, PhD
Vanina Leschziner - BA, MA, PhD
Joel Lexchin - MD
Kathleen Liddle - BA, MA, PhD
Alexandra Marin - Asst Prof
Paula Maurutto - PhD
Ito Peng - BA, BSW, MA, PhD
Scott Schieman - BA, MA, PhD
Jack Wayne - BA, MA, PhD
Weiguo Zhang - BS, MA, PhD
Sociology and Equity Studies in Education  SES

Degree Programs

Faculty Affiliation
Ontario Institute for Studies in Education

Degree Programs Offered
Sociology and Equity Studies in Education  
– MA, MEd, EdD, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Aboriginal Health, see p. 404
   • Sociology and Equity Studies in Education, MA, MEd, EdD, PhD
2. Comparative, International, and Development Education, see p. 430
   • Sociology and Equity Studies in Education, MA, MEd, EdD, PhD
3. Environmental Studies, see p. 443
   • Sociology and Equity Studies in Education, MA, MEd, EdD, PhD
4. Ethnic and Pluralism Studies, see p. 445
   • Sociology and Equity Studies in Education, MA, MEd, EdD, PhD
5. Sexual Diversity Studies, see p. 469
   • Sociology and Equity Studies in Education, MA, MEd, EdD, PhD
6. South Asian Studies, see p. 471
   • Sociology and Equity Studies in Education, MA, MEd, EdD, PhD
7. Women and Gender Studies, see p. 473
   • Sociology and Equity Studies in Education, MA, MEd, EdD, PhD

Overview
The Department of Sociology and Equity Studies in Education (SESE) offers a full range of programs leading to Master of Arts, Master of Education, Doctor of Education, and Doctor of Philosophy degrees. These programs offer students preparation in sociology in education with an emphasis on equity issues.

Sociology in education is the study of the social context of education. The department understands education as a broad, multi-faceted concept, that is, a social organization of knowledge, teaching, and learning which takes place both within and beyond schooling. “Equity” is the lens through which we approach these phenomena. We blend with this vision the principles of interdisciplinarity and community engagement, and in our programs we actively seek to bridge divisions between theory and practice.

The department offers opportunities to investigate and integrate several thematic areas. Students are encouraged to integrate their studies across a variety of areas. Included in our offerings are courses related to Aboriginal and Indigenous studies in education, critical race and anti-racism studies in education, culture, communication and critical education, disability studies in education, feminist studies and gender relations in education, les études francophones, learning, work and social change, and queer studies in education.

Contact and Address
Web: www.oise.utoronto.ca/depts/sese
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Telephone: (416) 978-0397
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Department of Sociology and Equity Studies in Education
The Ontario Institute for Studies in Education of the University of Toronto
252 Bloor Street West
Toronto, Ontario M5S 1V6
Canada

Degree Programs

Master of Arts

Minimum Admission Requirements
• The department welcomes applicants with diverse but relevant backgrounds.
• Students are admitted under the general requirements outlined in the Minimum Admission, Program, and Degree Requirements section, OISE/UT Graduate Bulletin.
• Admission to the MA requires an appropriate four-year University of Toronto degree in sociology or a related discipline or its equivalent from a recognized university, with standing equivalent to a University of Toronto B+ or better in the final year.
• Applicants are required to submit the following. Incomplete applications may be subject to processing delays or rejection.
  o a careful statement of intellectual interests and concerns relevant to sociology and equity studies in education as well as reasons for undertaking a program in the department, including a statement of preference for one or more of the departmental research areas;
  o two letters of reference, preferably from university instructors with whom the applicant has studied or worked;
  o at least one sample of written work in the social sciences.

Program Requirements
• The MA is a research-based degree program which can be taken on a full-time or part-time basis.
• Students normally take 3.0 full-course equivalents (FCE), at least 2.0 FCE (3/4 of a MA coursework assignment) as SESE courses. Students who are registered in a collaborative program have their home department course requirement reduced by 0.5 FCE only.
• Additional courses may be required of some students, and some students may be required to take specified courses in research methods and/or sociological theory.
• Students complete a thesis under which may lay the groundwork for doctoral research.

Master of Education

Minimum Admission Requirements

• The department welcomes applicants with diverse but relevant backgrounds.
• Students are admitted under the general requirements outlined in the Minimum Admission, Program, and Degree Requirements section, OISE/UT Graduate Bulletin.
• Admission to the MEd requires an appropriate four-year University of Toronto degree in sociology or a relevant discipline or its equivalent from a recognized university, with standing equivalent to a University of Toronto mid-B or better in the final year.
• Applicants must have the equivalent of 12 months' professional experience.
• Applicants are required to submit the following. Incomplete applications may be subject to processing delays or rejection.
  o a careful statement of intellectual interests and concerns relevant to sociology and equity studies in education as well as reasons for undertaking a program in the department, including a statement of preference for one or more of the departmental research areas;
  o two letters of reference, preferably from university instructors with whom the applicant has studied or worked;
  o at least one sample of written work in the social sciences.

Program Requirements

• Students choose to complete the MEd program by one of three options:
  o Option II - 4.0 full-course equivalents (FCE) plus a Major Research Paper (MRP)
  o Option III - 3.0 full-course equivalents (FCE) plus a thesis
  o Option IV - 5.0 full-course equivalents (FCE)
• At least half of the FCE in an MEd program must be SESE courses. Those students registered in a collaborative program associated with SESE will have their required home department courses reduced by 0.5 FCE only.
• The degree may be completed on a full-time or part-time basis.
Degree Programs

SES 2915H Managing Educational and Employment Diversity
SES 2940H Rethinking Marxism and Education
SES 2941H Social Inequities and Education
SES 2942H Education and Work
SES 2970H Indigenous Peoples and Medias: Theorizing, Decolonizing, Cultural Vitalization and Self-Determination
SES 2990H Individual Reading and Research in Sociology and Equity Studies in Education: Master's Level
SES 2999H Special Topics in Sociological Research in Education

Doctor of Education
The EdD degree program is distinct from the PhD in that students are encouraged to orient toward applied and theoretical dimensions of professional educational practice understood as knowledge, teaching and learning which takes place within or beyond schooling.

Minimum Admission Requirements
- The department welcomes applicants with diverse but relevant backgrounds.
- Students are admitted under the general requirements outlined in the Minimum Admission, Program, and Degree Requirements section, OISE/UT Graduate Bulletin.
- Admission to the EdD 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 standing equivalent to a University of Toronto B+ or better in master’s courses.
- Applicants must have the equivalent of 12 months’ professional experience.
- Applicants are required to submit the following. Incomplete applications may be subject to processing delays or rejection.
  - a careful statement of intellectual interests and concerns relevant to sociology and equity studies in education as well as reasons for undertaking a program in the department, including a statement of preference for one or more of the departmental research areas;
  - two letters of reference, preferably from university instructors with whom the applicant has studied or worked;
  - at least one sample of written work in the social sciences.

Program Requirements
- PhD students who are admitted without sufficient previous study in sociology or a cognate discipline may be required to take a longer program.
- Applicants are required to submit the following. Incomplete applications may be subject to processing delays or rejection.
  - a careful statement of intellectual interests and concerns relevant to sociology and equity studies in education as well as reasons for undertaking a program in the department, including a statement of preference for one or more of the departmental research areas;
  - two letters of reference, preferably from university instructors with whom the applicant has studied or worked;
  - at least one sample of written work in the social sciences.

Doctor of Philosophy
The PhD degree program is designed to provide opportunities for advanced study, original research, and theoretical analysis.

Minimum Admission Requirements
- The department welcomes applicants with diverse but relevant backgrounds.
- Students are admitted under the general requirements outlined in the Minimum Admission, Program, and Degree Requirements section, OISE/UT Graduate Bulletin.
- PhD students who are admitted without sufficient previous study in sociology or a cognate discipline may be required to take a longer program.
- Applicants are required to submit the following. Incomplete applications may be subject to processing delays or rejection.
  - a careful statement of intellectual interests and concerns relevant to sociology and equity studies in education as well as reasons for undertaking a program in the department, including a statement of preference for one or more of the departmental research areas;
  - two letters of reference, preferably from university instructors with whom the applicant has studied or worked;
  - at least one sample of written work in the social sciences.

Program Requirements
- PhD students must maintain full-time status throughout their program of study and complete the requirements of their degree within six years. Students normally take 3.0 full-course equivalents (FCE), though additional courses may be required of some students, and some students may be required to take specified courses in research methods and/or sociological theory. At least 3/4 of a PhD course work assignment must be taken as SESE courses. Students who are registered in a collaborative program have their home department course requirement reduced by 0.5 FCE.
  - PhD students register full-time during the first four years and part-time during subsequent years of the program. The flexible-
time PhD degree is designed to accommodate demand by practicing professionals for a PhD degree that permits continued employment in areas related to their fields of research. Students must complete the requirements of their degree within eight years. Degree requirements for the flexible-time PhD programs are the same as for full-time PhD studies: normally, 3.0 FCE of which at least 2.0 FCE must be taken in SESE with a 0.5 FCE reduction if the student is also registered in a collaborative program. Students would normally take at least one specialized research methods course.

- All PhD students must also successfully complete the non-credit course SES 1913H SESE Thesis Students’ Seminar.
- With the prior approval of their faculty advisor and the Registrar's Office (Graduate Studies Registration Unit) students are permitted to take the equivalent of 1.0 FCE at another recognized graduate institution for credit in this Program. However, students must commence their program of study with OISE/UT courses.
- All PhD students are expected to complete a comprehensive requirement and a thesis.

Courses
Not all courses are offered every year. Please consult OISE/UT's Graduate Studies Course Schedule.

Doctoral Level
SES 3900H Advanced Issues in Sociological Research Methods in Education
SES 3910H Advanced Seminar on Race and Anti-Racism Research Methodology in Education
SES 3911H Cultural Knowledges, Representation and Colonial Education
SES 3912H Race and Knowledge Production: Research Methods
SES 3913H En/Coding Domination: Theorizing Power Relations Based on Race, Gender, Class and Sexuality
SES 3914H Anti-Colonial Thought and Pedagogical Challenges
SES 3921H Language and Social Difference in Education: Comparative Perspectives
SES 3929H Advanced Disability Studies: Transgressive Bodies/Transgressive Methods
SES 3930H Methods to Avoid Sexist, Racist and Ableist Biases in Research
SES 3932H Women and Higher Education
SES 3933H Theorizing Transnationality: Feminist Perspectives
SES 3942H Innovations in Education: A Comparative Analysis
SES 3943H Sociology of State Formation and Genealogies of Government
SES 3949H Advanced Studies in Learning and Work: Class Conflict, Labour and Learning in the Information Age
SES 3951H Political Economy, Cultural Forms and the Learning Society
SES 3952H Sexism, Racism, Colonialism: Pedagogical Implications
SES 3998H Individual Reading and Research in Sociology and Equity Studies in Education: Doctoral Level
SES 3999H Special Topics in Advanced Sociological Research in Education
JSA 5147H Language, Nationalism and Post-Nationalism
JTE 1952H Language, Culture, and Education
JTE 1952H Langue, culture et éducation
JTE 2912H Teacher’s Work: Classrooms, Careers, Cultures, and Change

Graduate Faculty

Full Members
Sandra Acker - BA, MA, PhD
Kari Dehli - BA, MA, PhD (Chair)
George JS Dei - BA, MA, PhD
Margrit Eichler - MA, LLD, PhD (Coordinator of Graduate Studies)
Diane Farmer - BA, MA, PhD
Jane Gaskell - BA, EdD
Paul Grayson
Monica Heller - BA, MA, PhD
Judy Iseke-Barnes - PhD
Helen Lenskyj - BA, MA, PhD
David Livingstone - BA, PhD, CRC
Paul Olson - BA, MA
Jack Quarter - BA, MA, PhD
Sherene Razack - BA, MA, PhD
Warnie Richardson
Peter Sawchuk - BSc, BEd, MA, PhD
Roger Simon - BS, PhD
Tanya Titchkosky
Alissa Trotz - BA, MPhil, PhD
Rinaldo Walcott - BA, MA, PhD
Njoki Wane - BA, MA, PhD

Members Emeriti
Ruth Pierson - PhD
Dorothy Smith - PhD

Associate Members
Jacqui Alexander
Jazira Asanova - PhD
Martin Cannon
Bernardo Garcia-Dominguez - PhD
Deborah Harrison
David Hayes - PhD
Ping-Chun Hsiung - BA, MA, MA, PhD
Pablo Idahoa - PHD
Jennifer Jenson - PHD

Sociology and Equity Studies in Education
Degree Programs

Basil Johnston
Didi Khayatt - PHD
Alyson King
June Larkin - BA, MEd, PhD
Allan Lauzon - PHD
Bonita Lawrence - PHD
Erica Lawson - BA, MA, PhD
D'arcy Martin - BA, MA, EdD
Aparna Mishra Tarc - BA, Bed, Med, PhD
Ann Mullen - BA, MA, PhD
Sheryl Nestel - BA, MA, PhD
Roxana Ng - BA, MA, PhD
Nana Osei-Kofi
Kerry Preibisch
Machiste Washinabana Quintana
Elisabeth Richards - BA, MeD, EdD
Betty Jane Richmond - BA, MES, PhD
Wallace Seccombe
Donald Wiebe - PHD
Suzie Young - PHD
Jasmin Zine - BA, MA, PHD
Degree Programs

Spanish SPA

Faculty Affiliation
Arts and Science

Degree Programs Offered
Spanish – MA, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Editing Medieval Texts, see p. 437
   • Spanish, PhD
2. Women and Gender Studies, see p. 473
   • 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 three fields:
• Spanish Peninsular Literature
• Latin American Literature
• Hispanic Linguistics.

Applicants are accepted 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 course work for the MA is completed.

Contact and Address
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E-mail: spanport@chass.utoronto.ca
or Spanish.graduate@utoronto.ca
Telephone: (416) 813-4080 or 416-813-4082
Fax: (416) 813-4084

Department of Spanish
Victoria College
Room 208, 91 Charles Street West
University of Toronto
Toronto, Ontario M5S 1K7
Canada

Degree Programs

Master of Arts

Minimum Admission Requirements
• Four-year undergraduate degree or the equivalent from a recognized university in Spanish or a cognate discipline.
• Fluency in spoken and written Spanish with a general background in Hispanic literature and/or linguistics, normally demonstrated through undergraduate course work.
• Applicants apply online and should arrange for electronic submission of the following material:
  o a one-page statement of purpose, outlining the applicant's areas of interest
  o a sample of written work in Spanish (10-12 pages)
  o a TA application form (available from the department's Web site)
  o two letters of recommendation (one of the letters must comment on the applicant's fluency in Spanish)

Program Requirements
• 4.0 full-course equivalents (FCE) at the graduate level.
• MA students specialize in one of three fields:
  o Spanish Peninsular Literature
  o Latin American Literature
  o Hispanic Linguistics
Specialization requires that each student complete course work in accordance with distribution requirements for each field, defined in terms of the various areas of the graduate curriculum. Specific requirements by field are available on the department's Web site.
• With departmental approval, courses may be taken in a cognate discipline (for example, Comparative Literature, French, History, Linguistics, Medieval Studies, Women's Studies).
• It is the department's expectation that full-time students will complete all program requirements in one academic year. The MA program is also available on a part-time basis. Applicants should be aware that part-time students are not eligible for funding.
• Students in the field Hispanic Linguistics must have completed an introductory course in linguistics (LIN 100Y or an equivalent course). Students who have not completed LIN 100Y as part of their undergraduate studies must take this course in the summer directly preceding their admission to the MA program.
Degree Programs

Doctor of Philosophy

Minimum Admission Requirements
- 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
  - a sample of written work in Spanish (10-12 pages)
  - a TA application form (available from the department's Web site)
  - two letters of recommendation (one of the letters must comment on the applicant's fluency in Spanish)

Program Requirements
- PhD students specialize in one of three fields:
  - Spanish Peninsular Literature
  - Hispanic Linguistics
  - Latin American Literature
- 4.0 full-course equivalents (FCE). It is expected that students will complete the required course work during Year 1. However, with the approval of the Graduate Coordinator, up to 1.0 FCE courses may be taken in Year 2. Each field has distribution requirements; details on the department's Web site.
- The field examination centres on two subfields of Hispanic literature or linguistics: the subfield of the student's proposed dissertation research and a subfield relevant to the student's research and general preparation.
- A dissertation proposal must be submitted on the research questions and methodology of the student's proposed research. The proposal should be written in the language that the student intends to use in writing the dissertation (Spanish or English) and must be defended in an oral examination.
- 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 his/her area of research. These language requirements may be satisfied by passing the appropriate reading knowledge examinations offered by the various departments of language and literature at the University of Toronto. Significant prior training in a language (such as an undergraduate Major or Minor) will also be accepted as demonstration of reading knowledge.
- Years 3 and 4 are devoted to researching and writing the doctoral dissertation. The Supervisory Committee must normally approve the dissertation before the candidate can proceed to the 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 fulfill 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.
- The program must be completed within six years of the student's initial enrolment.

Courses
Most graduate courses are offered in a regular rotation. As a result, approximately half 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 Web site.

COL 5019H Cervantes and Humanism
COL 5029H Reading Cervantes
JRL 1100Y Introduction to Romance Philology
JRL 1101H Topics in Romance Laboratory Phonetics and Phonology I: Theory
JRL 1106H Topics in Romance Laboratory Phonetics and Phonology II
LIN 1029H Sound Patterns in Language
LIN 1031H Morphological Patterns in Language
SPA 1053H History of the Spanish Language
SPA 1080H Descriptive Grammar of Spanish
SPA 1081H The Structure of Spanish
SPA 1082H Sociolinguistics of Spanish
SPA 1083H Microvariation in Spanish
SPA 1084H Experimental Approaches to Hispanic Linguistics
SPA 1088H Spanish Syntax
SPA 1089H Morphosyntax
SPA 1097H Second-Language Teaching and Methodology
SPA 1101H Topics in the Acquisition of Spanish
SPA 1103H Topics in Spanish Phonology
SPA 1104H Experimental Approaches to Sound Variation and Change
SPA 1150H,Y Directed Research in Hispanic Linguistics
SPA 2021H The Politics of Print
SPA 2022H Books and Borders
SPA 2031H Writing that Conquers: Early Colonial Historiography
SPA 2032H The Spiritual Conquest of the Americas: Empire and Ethnography
SPA 2033H Representing Colonial Violence and Terror
SPA 2121H Psychoanalysis and the Passions in Early Modern Literature
SPA 2187H Comedy and the Comedia in Early Modern Spain
SPA 2189H Lope and Calderón
SPA 2277H The Modern Spanish Cuento (1860-1936)
SPA 2279H Contemporary Hispanic Women's Writing II
SPA 2282H The Contemporary Spanish Cuento (1936-Present)
SPA 2284H Narrative and Political Transition in Contemporary Spain
SPA 2291H The Urban Experience in Spain
SPA 2351H Masters of Twentieth-Century Spanish Drama
SPA 2404H The Latin American Novel
SPA 2405H Issues of Testimonio
SPA 2432H Text and Image in Latin American Culture
SPA 2802H The Politics of Errantry in the Hispanic Caribbean
SPA 2805H Representations of Women in Latin American Culture
SPA 2900H Issues in Literary Theory and Hispanic Texts
SPA 2905H Latin American Cultural Theories
SPA 2951H Modernism in Latin America
SPA 3000H,Y Directed Research in Hispanic Literatures

Graduate Faculty

Full Members
Josiah Blackmore - BA, MA, PhD
Laura Colontoni - MA, PhD
Marcel Danesi - BA, MA, PhD, FRSC
Robert Davidson - MA, PhD (Coordinator of Graduate Studies)
Eva-Lynn Jagoe - MA, PhD
Sanda Munjic - MA, PhD
Ana Teresa Perez-Leroux - BA, MA, PhD
Nestor Rodriguez - MA, PhD
Stephen Rupp - BA, MA, MPhil, PhD (Chair)
Rosa Sarabia - BA, MA, PhD
Ricardo Sternberg - BA, MA, PhD

Members Emeriti
James Burke - BA, MA, PhD
Keith Aa Ellis - BA, MA, PhD, DFil, FRSC
Robert Glickman - AM, PhD
Joseph Gulsoy - MA, PhD, FRSC
Pedro Leon - MA, PhD
Erminio Neglia - MA, PhD
Anthony Percival - BA, MA, PhD
Wendy Rolph - BA, MA, MPh
Raymond Skyrme - BA, MA, MLitt, PhD
Mario Valdes - BA, MA, PhD, FRSC, Miembro Correspondiente de la Academia Mexicana
Jill Webster - BA, MA, PhD, FRSC

Associate Members
Maria Cristina Cuervo - MA, PhD
Manuel Ramirez-Salazar - MA, PhD
Speech-Language Pathology

Degree Programs

Faculty Affiliation
Medicine

Degree Programs Offered
Speech-Language Pathology – MHSc, MSc, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Aging, Palliative and Supportive Care Across the Life Course, see p. 408
   • Speech-Language Pathology, MSc, PhD
2. Neuroscience, see p. 466
   • Speech-Language Pathology, MSc, PhD

Overview
Speech-language pathology is concerned with normal and disordered human communication and swallowing. The Department offers professional and research degree programs leading to careers in the discipline.

The Master of Health Science program in speech-language pathology is a professional graduate program that may be taken on a full-time or part-time basis. The primary aim of the program is to prepare practitioners for entry into the practice of speech-language pathology. Graduates are prepared to assume varied professional responsibilities including the assessment, treatment, and management of speech, voice, language, and swallowing disorders. Course work and clinical internships are integrated and sequenced. There is a strong research to practice focus and students complete a comprehensive portfolio requirement in their final year.

The Master of Science degree is a full-time program that prepares students to engage in the scientific study of normal and disordered speech, language and swallowing processes in children and adults. The MSc is a research-oriented program and does not prepare students for clinical practice. Although the primary objective of the MSc program is to prepare students for doctoral studies in speech and language sciences, successful completion of the program does not guarantee entrance into the PhD program.

The purpose of the Doctor of Philosophy program is to prepare students to contribute independently to the advancement of scientific knowledge in their area of specialization within the discipline of speech-language pathology.

Contact and Address
Web: www.slp.utoronto.ca
E-mail: speech.path@utoronto.ca
Telephone: (416) 978-2785
Fax: (416) 978-1596

Degree Programs

Master of Health Science

Minimum Admission Requirements
• Four-year University of Toronto bachelor’s degree, with at least a mid-B standing in the final year, or its equivalent from another recognized university.
• Prerequisite courses in child development, linguistics, phonetics, statistics, and human physiology.
• Facility in oral and written English 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 facility 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:
  o Paper-based TOEFL: 600 with 5 on the Test of Written English (TWE) and 50 on the Test of Spoken English (TSE)
  o Computer-based TOEFL: 250 with 5 on the essay rating component and 50 on the TSE.
  o 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, TWE, and TSE, the Department will accept one of the following:
  o the Michigan English Language Assessment Battery (MELAB) with a minimum score of 85
  o 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 where their mastery of oral English for meeting clinical requirements will be assessed.

See the departmental Web site for a full listing of admission requirements.

Program Requirements
• The professional MHSc program is divided into 5 academic and 4 clinical units. Each academic unit is made up of topic-related courses. Teaching within and across units emphasizes integrated learning experiences. Academic units are followed by full-time clinical placements, each lasting between 4 and 10 weeks for a total of 31 weeks of clinical experience.
throughout the 2 year program. Students should anticipate receiving at least one placement outside of metropolitan Toronto. Students must accept placements offered to them and are responsible for all travel and accommodation costs.

- The MHSc program does not have a thesis requirement; however, prior to graduation, all MHSc students will be required to complete a portfolio that demonstrates proficiency in key areas of professional practice.
- Students enrolled in the full-time program must complete all requirements within two consecutive years.
- Part-time students must choose one of three options for program completion: four-year, five-year, or six-year. Each option includes a prescribed sequence of academic and clinical units that must be followed. Part-time students must complete clinical units on a full-time basis (five days per week).

Courses for the MHSc Program
Consult the departmental Web site for a listing of courses offered during each academic year.

The first year of the program for full-time students will consist of:
- SLP 1500Y+ Internship (Credit/No Credit)
- SLP 1502Y Anatomy and Embryology
- SLP 1503Y Articulation and Related Disorders
- SLP 1505Y Child Language I
- SLP 1506H Child Language II
- SLP 1507H* Clinical Laboratory in Speech-Language Pathology
- SLP 1514Y Applied Audiology
- SLP 1516H Aural Rehabilitation
- SLP 1520H Principles of Clinical Practice
- SLP 1521H Augmentative Communication
- SLP 1522Y Speech Physiology and Acoustics
- SLP 1529H Fluency Disorders
- SLP 1530H Voice Disorders
- SLP 1532H+ Clinical Laboratory in Hearing Disorders: Aural Rehabilitation or Audiology Component

The second year of the program for full-time students will consist of:
- SLP 1508Y Advanced Clinical Laboratory in Speech-Language Pathology
- SLP 1525H Structurally Related Disorders
- SLP 1527H+ Physical Analysis of Speech Disorders
- SLP 1528H+ Research in Speech-Language Pathology
- SLP 1533Y Aphasia
- SLP 1534H Motor Speech Disorders
- SLP 1535H+ Advanced Principles of Clinical Practice
- SLP 1536H Swallowing Disorders
- SLP 1538H Neurocognitive Communication Disorders
- SLP 2500Y Advanced Internship

* Courses which may continue over a program. The course is graded when completed.
+ Extended course. For academic reasons, course work is extended into session following academic session in which course is offered.

Master of Science

Minimum Admission Requirements
- Four-year degree, or its equivalent, in speech-language pathology or a related discipline.
- Prior to admission, an applicant must identify a faculty member who has agreed to serve as research supervisor. The research supervisor may want 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 was not English, must demonstrate facility in the English language through the successful completion of one of the English proficiency tests listed in this calendar. See General Regulations, English Language Facility.

Program Requirements
- Course requirements are determined by the student’s supervisory committee. Normally, the student is required to complete satisfactorily a minimum of 2.0 full-course equivalents (FCE), consisting of at least 1.0 FCE in research design and methodology, and at least 1.0 FCE in the area of research interest.
- One-year residency period which typically is sufficient for completion of the course work.
- Participate in student and faculty research seminars.
- Engage in a research project, present the results in a written thesis, and complete a successful oral defence of the thesis.
- Reclassification. 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 direct advancement to the PhD program. Examination normally is undertaken following the completion of at least one session and within 18 months of registration in the MSc program.

Doctor of Philosophy

Minimum Admission Requirements
- Normally, applicants are expected to have completed a MSc or MA degree in speech-language pathology, or a related discipline, with a minimum of a B+ average over the course of the program.
- Demonstrated advanced research qualifications in speech and language sciences.
- Prior to admission, an applicant must identify a faculty member who has agreed to serve as research supervisor. The research supervisor may want 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 was not English, must demonstrate facility in the English language through the successful completion of one of the English proficiency tests listed in this calendar. See General Regulations, English Language Facility.

Courses for the MHSc Program
Consult the departmental Web site for a listing of courses offered during each academic year.

The first year of the program for full-time students will consist of:
- SLP 1500Y+ Internship (Credit/No Credit)
- SLP 1502Y Anatomy and Embryology
- SLP 1503Y Articulation and Related Disorders
- SLP 1505Y Child Language I
- SLP 1506H Child Language II
- SLP 1507H* Clinical Laboratory in Speech-Language Pathology
- SLP 1514Y Applied Audiology
- SLP 1516H Aural Rehabilitation
- SLP 1520H Principles of Clinical Practice
- SLP 1521H Augmentative Communication
- SLP 1522Y Speech Physiology and Acoustics
- SLP 1529H Fluency Disorders
- SLP 1530H Voice Disorders
- SLP 1532H+ Clinical Laboratory in Hearing Disorders: Aural Rehabilitation or Audiology Component

The second year of the program for full-time students will consist of:
- SLP 1508Y Advanced Clinical Laboratory in Speech-Language Pathology
- SLP 1525H Structurally Related Disorders
- SLP 1527H+ Physical Analysis of Speech Disorders
- SLP 1528H+ Research in Speech-Language Pathology
- SLP 1533Y Aphasia
- SLP 1534H Motor Speech Disorders
- SLP 1535H+ Advanced Principles of Clinical Practice
- SLP 1536H Swallowing Disorders
- SLP 1538H Neurocognitive Communication Disorders
- SLP 2500Y Advanced Internship

* Courses which may continue over a program. The course is graded when completed.
+ Extended course. For academic reasons, course work is extended into session following academic session in which course is offered.
in the English language through the successful completion of one of the English proficiency tests listed in this calendar. Students who graduated from a university outside North America are strongly encouraged to contact the Coordinator of Graduate Studies before applying. See General Regulations, English Language Facility.

- **Reclassification.** 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 direct advancement to the PhD program. Examination normally is undertaken following the completion of at least one session and within 18 months of registration in the MSc program.

**Program Requirements**

- Course requirements are determined by the student's supervisory committee and consist of a minimum of 3.0 full-course equivalents (FCE).
- Students must demonstrate evidence of adequate knowledge in research design and statistics or must include suitable course work as determined by the supervisory committee.
- Participate in student and faculty research seminars in addition to their regular course requirements.
- The doctoral program consists of 2 phases, each taking approximately 18 to 24 months to complete. During the first phase of the program, the student completes all course requirements and initiates the development of a research thesis proposal, including the collection of preliminary experimental data, if appropriate. At the conclusion of this first phase, the student completes a departmental comprehensive examination that includes a full research proposal and a conceptual paper on a topic chosen by the student and the supervisory committee. The second phase of the program is devoted almost exclusively to the completion of the thesis research project. At the conclusion of this second phase, the student defends the research thesis at a final oral examination in accordance with the regulations of the School of Graduate Studies.
- The PhD program normally extends over three to four years. Students complete a residency requirement during the first two years of the program.

**Courses for the MSc and PhD Programs**

- SLP 3001H Theoretical Foundations of Communication Sciences
- SLP 3002H Research Methodologies in Communication Sciences
- SLP 3003H Research Seminar
- SLP 3004H,Y Reading Seminar
- SLP 4000H Research Seminar
- SLP 4001H Philosophical and Theoretical Foundations of Communication Sciences
- SLP 4007H,Y Reading Seminar

Courses which may continue over a program. The course is graded when completed.

**Special Courses Offered to Students from Other Departments**

- SLP 2501H Special Topics in Communication Disorders
- SLP 2502Y Specialized Study in Communication Disorders

**Graduate Faculty**

**Full Members**
- Sharon Abel - BSc, MA, PhD
- Tim Bressmann - MA, MSc, PhD
- Luc De Nil - MSc, PhD (Chair)
- Alice Eriks-Brophy - MSc, PhD
- Luigi Girolametto - BA, MSc, PhD (Coordinator of Graduate Studies)
- Martyn Hyde - BSc, PhD
- Carla Johnson - BS, MS, MA, PhD
- Rosemary Martino - MA, MSc, PhD
- Julie Mendelson - BSc, PhD
- Elizabeth Rochon - BA, MSc, PhD
- Ronald Smyth - BA, MSc, PhD
- Paula Ann Square - BSc, MA, PhD
- Catriona Steele - BA, MHSc, PhD
- Patricia Stewart - BSc, MSc, PhD
- Pascal van Lieshout - PhD

**Associate Members**
- Kimberley Bradley - BA, MHSc, PhD
- Lynn Ellwood - BSc, MHSc
- Jonathan Irish – MD, MSc
- Marlene Jacobson - BA, PhD
- Aura Kagan - PhD
- Robert Kroll - BSc, MSc, PhD
- Carol Leonard - BA, MSc, PhD
- Lisa McQueen
- Pauline Parnes - BSc, DSPA
- Sheila Roberts - MD
- Susan Wagner - BSc, MSc
- Elaine Weitzman - BA, MEd
- Yana Yunusova - MS, PhD
Statistics STA

Faculty Affiliation
Arts and Science

Degree Programs Offered
Statistics – MSc, PhD

Overview
Statistics is the study of random phenomena and as such encompasses a broad range of scientific, industrial, and social processes. The past several decades have witnessed a vast impact of statistical methods on virtually every branch of knowledge and empirical investigation.

The Department of Statistics offers opportunities for study and research in the fields of probability, applied probability, theoretical statistics, and applied statistics leading to the Master of Science and the Doctor of Philosophy degrees. The Department has substantial computing facilities available and operates a statistical consulting service for the University’s research community. Programs of study may involve association with other departments such as Mathematics, Mechanical and Industrial Engineering, Computer Science, or Public Health Sciences. The Department maintains an active seminar series and strongly encourages participation by graduate students.

Students are accepted under the general regulations. Proof of English facility must also be shown for all applicants whose first language is not English and who studied at an institution where the language of instruction was other than English.

Interested applicants should refer to the detailed information available in the Graduate Information brochure and on the Department’s web site.

Contact and Address
Web: www.utstat.utoronto.ca
E-mail: grad-info@utstat.utoronto.ca
Telephone: (416) 978-5136
Fax: (416) 978-5133

Department of Statistics
University of Toronto
Sidney Smith Hall
Room 6022, 100 St. George Street
Toronto, Ontario M5S 3G3
Canada

Degree Programs
Master of Science
Minimum Admission Requirements
- Appropriate four-year bachelor’s degree with a final year average of at least mid-B from the University of Toronto or its equivalent from another recognized university.
- Recommended background of courses as outlined in the Graduate Information brochure available on Department’s Web site.

Program Requirements
All programs must be approved by the Associate Chair for Graduate Studies.

One Year Full-Time Program
Students within this option normally complete:
- 4.0 full course equivalents (FCE), one of which may be an approved supervised reading project OR
- 3.5 FCE comprising STA 3000Y plus five 0.5 FCE.

Two-Year Full-Time Program
Year 1
- Completion of prerequisite and other courses to prepare the student for the one-year MSc program.
Year 2
- 4.0 full-course equivalents (FCE), one of which may be an approved supervised reading project OR
- 3.5 FCE comprising STA 3000Y plus five 0.5 FCE.

Part-Time Program
Students must satisfy the program requirements outlined for the full-time MSc.

Doctor of Philosophy
Minimum Admission Requirements
- Appropriate University of Toronto master’s degree or its equivalent, with an average of at least B+ or demonstrated comparable research competence
- The Department of Statistics considers exceptional applicants directly from undergraduate studies. These applicants must meet additional course requirements.

Program Requirements
PhD Program
- 3.0 full-course equivalents (FCE) including STA 2111H, STA 2211H, and STA 3000Y.
- Students are required to pass a comprehensive examination in theoretical statistics, probability and applied statistics prior to embarking on a thesis.
- Submission of a suitable thesis.
- One-year residence period.
- Further details are found in the Graduate Information brochure available on the Department’s Web site.

Direct Entry Program
Students admitted to the direct entry program must normally:
- Complete STA 2111H, STA 2211H, STA 3000Y plus four other half-courses.
- Satisfy a two-year residency requirement.
## 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 Graduate Information brochure for courses offered in the current academic year.

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<td>STA 1001H</td>
<td>Applied Regression Analysis</td>
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<td>STA 1003H</td>
<td>Sample Survey Theory and its Application</td>
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<tr>
<td>STA 1004H</td>
<td>Introduction to Experimental Design</td>
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<tr>
<td>STA 1005H</td>
<td>Applied Multivariate Analysis</td>
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<tr>
<td>STA 1007H</td>
<td>Statistics for Life and Social Scientists</td>
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<tr>
<td>STA 1008H</td>
<td>Applications of Statistics</td>
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<td>STA 2004H</td>
<td>Design of Experiments</td>
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<td>STA 2006H</td>
<td>Applied Stochastic Processes</td>
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<tr>
<td>STA 2050H</td>
<td>Mathematical Methods for Statistics</td>
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<tr>
<td>STA 2100H</td>
<td>Mathematical Methods for Statistics I</td>
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<tr>
<td>STA 2101H</td>
<td>Methods of Applied Statistics I</td>
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<tr>
<td>STA 2102H</td>
<td>Computational Techniques in Statistics</td>
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<tr>
<td>STA 2103H</td>
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<td>STA 2104H</td>
<td>Statistical Methods for Machine Learning and Data Mining</td>
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<td>STA 2105H</td>
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<td>STA 2209H</td>
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<td>STA 2211H</td>
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<td>STA 2212H</td>
<td>Mathematical Statistics II</td>
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<td>STA 2262H</td>
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<td>STA 2270H</td>
<td>Introduction to Wavelet Methods in Statistics</td>
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<td>STA 2342H</td>
<td>Multivariate Analysis I</td>
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<tr>
<td>STA 2442H</td>
<td>Multivariate Analysis II</td>
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<td>STA 2453H</td>
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<td>STA 2500H</td>
<td>Loss Models</td>
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<td>STA 2501H</td>
<td>Mathematical Risk Theory</td>
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<td>STA 2502H</td>
<td>Stochastic Models in Investments</td>
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<td>STA 2503H</td>
<td>Applied Probability for Mathematical Finance</td>
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<td>STA 2505H</td>
<td>Credibility Theory and Simulation Methods</td>
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<td>STA 2542H</td>
<td>Linear Models</td>
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<td>STA 3000Y</td>
<td>Advanced Theory of Statistics</td>
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<td>STA 3003H</td>
<td>Advanced Sample Survey Theory and Practice</td>
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<td>STA 3047H</td>
<td>Stochastic Processes</td>
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<td>STA 3077H</td>
<td>Research Topics in Probability Theory</td>
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<td>STA 3101H</td>
<td>Neural Networks and Related Statistical Methods</td>
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<td>STA 3102H</td>
<td>Statistical Quality Control</td>
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<td>STA 3103H</td>
<td>Bayesian/Likelihood Asymptotics</td>
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<td>STA 3431H</td>
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<tr>
<td>STA 4000H</td>
<td>Supervised Reading Project I</td>
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<tr>
<td>STA 4001H</td>
<td>Supervised Reading Project II</td>
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<tr>
<td>STA 4210H</td>
<td>Smoothing, Semi- and Non-parametric Regression</td>
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<td>STA 4246H</td>
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<td>STA 4247H</td>
<td>Research Topics in Stochastic Processes</td>
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<td>STA 4272H</td>
<td>Research Topics in Statistics</td>
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<td>STA 4273H</td>
<td>Research Topics in Bayesian Inference</td>
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<td>STA 4274H</td>
<td>Research Topics in Statistical Computation</td>
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<td>STA 4275H</td>
<td>Research Topics in Likelihood Inference</td>
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<td>STA 4276H</td>
<td>Research Topics in Monte Carlo Methods</td>
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<td>STA 4312H</td>
<td>Bayesian Linear Models</td>
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<td>STA 4315H</td>
<td>Computational Methods in Statistical Genetics</td>
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<td>STA 4352H</td>
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<tr>
<td>STA 4360H</td>
<td>Theory of Pivotal and Direct Inference</td>
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<tr>
<td>STA 4364H</td>
<td>Conditional Inference: Sample Space Analysis</td>
</tr>
<tr>
<td>STA 4406H</td>
<td>Statistical Inference for Stochastic Processes</td>
</tr>
<tr>
<td>STA 4412H</td>
<td>Topics in Theoretical Statistics</td>
</tr>
</tbody>
</table>

## Graduate Faculty

### Full Members

- **Omer Angel** - PhD
- **David Brenner** - BSc, MSc, PhD
- **Samuel Broverman** - BSc, MSc, PhD, ASA
- **Lawrence Brunner** - BA, PhD, MA, PhD
- **Paul Corey** - BSc, MA, PhD
- **Virgil Radu Craiu** - BS, MS, PhD
- **Michael Escobar** - BS, PhD
- **Michael Evans** - BSc, MSc, PhD
- **Andrey Feuerverger** - BSc, PhD
- **Sebastian Jaimungal** - BASc, MSc, PhD
- **Keith Knight** - BSc, MS, PhD
- **Xiaodong Lin** - BSc, MSc, MMath, PhD, ASA
- **Wen-Yi Wendy Lou** - PhD
- **Philip McDunnough** - BSc, MSc, PhD
- **Radford Neal** - BSc, MSc, PhD
- **Jeremy Quastel** - BSc, MS, PhD
- **Nancy Reid** - BMath, MSc, PhD, FRSC
- **Jeffrey Rosenthal** - BSc, MA, PhD
- **James Stafford** - BSc, MSc, PhD (Chair)
- **Lei Sun** - BSc, PhD
- **Bálint Virág** - BA, MA, PhD

### Members Emeriti

- **David Andrews** - BSc, MSc, PhD, Fellow ASA
- **Donald AS Fraser** - BA, MA, MA, PhD, DM Math, FRSC
- **Irwin Guttman** - BMath, MMath, PhD, FSA, FCIA
- **Fang Yao**

### Associate Members

- **Andrei Badescu**
- **Alison Gibbs** - BMath, BEd, MSc, PhD
- **Alexander Kreinin** - MSc, PhD
- **Gordon Willmot** - BMath, MMath, PhD, FSA, FCIA
- **Fang Yao**
Theoretical Astrophysics

Faculty Affiliation
Arts and Science

Degree Programs Offered
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 enquire. CITA research fellows and visitors are also encouraged to work with graduate students.

Overview
Established in 1984, the Canadian Institute for Theoretical Astrophysics (CITA) is a national institute specializing in theoretical astrophysics. CITA is supported by the University of Toronto, the Natural Sciences and Engineering Research Council (NSERC), and the Canadian Institute for Advanced Research (CIFAR).

CITA owns an extensive and powerful network of massively parallel computers and workstations, including a 200 node, 1600 core beowulf computing cluster.

The research activities at CITA span most of the areas of modern theoretical astrophysics, including accretion disks, active galactic nuclei, general relativity, 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 and gamma-ray bursts, nucleosynthesis, solar system formation and dynamics, and comets.

CITA has the support of over 50 faculty members from about 20 Canadian universities. CITA also maintains a rotating complement of more than 20 post-doctoral fellows and research associates, and hosts an active program of visitors from other universities. The theoretical interests of many CITA staff are complemented by observational research. CITA researchers have active observing programs at a wide variety of ground-based and satellite telescopes in many different wavelength bands.

Contact and Address
Telephone: (416) 978-8879
Fax: (416) 978-3921
E-mail: office@cita.utoronto.ca
Web: www.cita.utoronto.ca

Canadian Institute for Theoretical Astrophysics (CITA)
Institut Canadien d’Astrophysique Théorique (ICAT)
Room 1403, McLennan Physical Laboratories
University of Toronto
Toronto, Ontario M5S 3H8
Canada

Graduate Faculty

Full Members
J Richard Bond - BSc, MS, PhD, FRS, FRSC, OC, Fellow CIAR, Fellow APS, University Professor
Lev Kofman - MSc, PhD, Fellow CIAR (Acting Director)
Peter Martin - BSc, MSc, PhD, FRSC
Norman Murray - BSc, PhD, Canada Research Chair
Ue-Li Pen - BSc, MSc, PhD
Christopher Thompson - BS, PhD
Degree Programs

Theory and Policy Studies in Education  TPS

Faculty Affiliation
Ontario Institute for Studies in Education

Degree Programs Offered
Educational Administration – MA, MEd, EdD, PhD
Higher Education – MA, MEd, EdD, PhD
History and Philosophy of Education – MA, MEd, EdD, PhD

Collaborative Programs Offered
Degree programs that participate in:
1. Comparative, International and Development Education, see p. 430
   • Educational Administration, MA, MEd, EdD, PhD
   • Higher Education, MA, MEd, EdD, PhD
   • History and Philosophy of Education, MA, MEd, EdD, PhD
2. Women and Gender Studies, see p. 473
   • Educational Administration, MA, MEd, EdD, PhD
   • Higher Education, MA, MEd, EdD, PhD
   • History and Philosophy of Education, MA, MEd, EdD, PhD

Overview
The Department of Theory and Policy Studies in Education (TPS) consists of three graduate programs, one representing two discipline-based fields (History and Philosophy of Education) and two representing the application of cognate scholarship to domains of practice (Educational Administration and Higher Education). Each program offers courses of study leading to Master of Arts, Master of Education, Doctor of Education, and Doctor of Philosophy degrees. Applications must be made to one of the three specializations: Educational Administration, Higher Education, History and Philosophy of Education.

For information about application procedures and forms, contact the OISE/UT Registrar's Office at (416) 978-1150 or 978-1166.
Fax: (416) 926-4741

For general admission and program requirements, consult the OISE/UT Graduate Studies in Education Bulletin section titled "Minimum Admission, Program and Degree Requirements". For complete information on TPS degree programs, consult the section of the Bulletin dealing with the Department of Theory and Policy Studies in Education.

Master of Education Options. At OISE/UT there are four options for completing the MEd degree:
Option I: Course work and comprehensive option: 5.0 full-course equivalents (FCE) plus a comprehensive examination/requirement.
Option II: Research project option: 4.0 FCE plus a research project or major research paper. Higher Education also requires a comprehensive examination.
Option III: Thesis option: 3.0 FCE plus a thesis.
Option IV: Course work only option: 5.0 FCE.

Information about available options in each graduate program follow.
Members of the Department also participate in delivering the preservice teacher education program (BEd), particularly the social foundations courses and courses rooted in educational history, philosophy, administration, and policy.

Contact and Address
Web: www.oise.utoronto.ca/depts/tps/
E-mail: ccavaliere@oise.utoronto.ca or jgoodlet@oise.utoronto.ca
Telephone: (416) 978-1166 or 978-1150
Fax: (416) 926-4741

Department of Theory and Policy Studies in Education
The Ontario Institute for Studies in Education of the University of Toronto (OISE/UT)
Sixth Floor, 252 Bloor Street West
Toronto, Ontario MSS 1V6
Canada

Degree Programs

Educational Administration

Master of Arts
The MA program in Educational Administration fosters the study of problems in the administration and leadership of educational programs. It will best serve students who have a commitment to scholarship and research as a means of deepening their understanding of administrative action in schools or in other educational and service institutions. While experience in teaching and administration is not an essential prerequisite for admission, such experience provides a desirable background. The MA is available through both full-time and part-time studies.

Minimum Admission Requirements
• General requirements listed in the OISE/UT Graduate Studies in Education Bulletin.
• Four-year University of Toronto bachelor's degree or its equivalent, in a relevant discipline or professional program, completed with the equivalent of a University of Toronto B+ standing in the final year.

Program Requirements
• 4.0 full-course equivalents (FCE) plus a thesis. Additional courses may be required of some applicants.

Master of Education
The MEd program in Educational Administration is designed primarily for students who are interested in learning the nature and practice of leadership and policy.
especially with respect to social diversity and change. The MEd degree may be pursued either part-time or full-time.

**Minimum Admission Requirements**
- General requirements listed in the OISE/UT Graduate Studies in Education Bulletin.
- An appropriate four-year University of Toronto bachelor's degree, or its equivalent from a recognized university completed with standing equivalent to a University of Toronto mid-B or better in the final year, preferably with a concentration and focus in an area relevant to the type of educational administration the applicant wishes to enter.
- An interest in the study and practice of administration.
- Academic qualifications beyond the first degree.
- Two letters of reference. Whenever possible, one should be written by an educational administrator for whom the applicant has worked; the second by a professional colleague.

**Program Requirements**
- There are three options available to all students within the MEd program in Educational Administration.
- **Option II** comprises:
  - 1.5 required FCE: TPS 1003H Conducting Research in Educational Administration; TPS 1040H Educational Administration I: Introduction to Educational Administration: Policy, Leadership, and Change; TPS 1041H Educational Administration II: Social and Policy Contexts of Schooling. TPS 1040H and TPS 1041H should be taken first; course TPS 1003H should be taken towards the end of the program.
  - 2.5 other FCE, of which at least 1.0 FCE must be in Educational Administration; TPS 1004H Research Literacy in Educational Administration is strongly recommended and should be taken at the beginning of the program. Students may choose to focus on one of the four program strands: Policy, Leadership, Change, or Social Diversity.
  - A Major Research Paper (MRP) to be carried out under the guidance of a faculty member.
- **Option III** comprises:
  - 1.5 required FCE: TPS 1003H Conducting Research in Educational Administration; TPS 1040H Educational Administration I: Introduction to Educational Administration: Policy, Leadership, and Change; TPS 1041H Educational Administration II: Social and Policy Contexts of Schooling. TPS 1040H and TPS 1041H should be taken first; course TPS 1003H should be taken towards the end of the program.
  - 1.5 other FCE, of which at least one must be in Educational Administration; TPS 1004H Research Literacy in Educational Administration is strongly recommended and should be taken at the beginning of the program.
  - A comprehensive thesis to be developed under the guidance of a faculty member.
- **Option IV** comprises:
  - 2.0 required FCE: TPS 1004H Research Literacy in Educational Administration; TPS 1040H Educational Administration I: Introduction to Educational Administration: Policy, Leadership, and Change; TPS 1041H Educational Administration II: Social and Policy Contexts of Schooling; TPS 1050H Themes and Issues in Policy, Leadership, Change, and Diversity. TPS 1004H, TPS 1040H, and TPS 1041H should preferably be the first courses taken in the student's program of study. TPS 1050H should normally be taken as the final course in the student's program.
  - 3.0 other FCE, of which at least 1.0 FCE must be in Educational Administration. Students may choose to focus on one of the four research areas: policy, leadership, change, and social diversity.

**Doctor of Education**
The EdD program in Educational Administration is intended to develop highly competent leaders for administrative positions in school systems, colleges, universities, and other educational institutions. The program is specifically designed to help working professional educators develop the intellectual and research skills to refine their practice as leaders in school systems and in higher education.

**Minimum Admission Requirements**
- General requirements listed in the OISE/UT Graduate Studies in Education Bulletin.
- Master's degree with specialization in Educational Administration or an equivalent degree with a B+ average. Additional course work may be required from those who do not have a background in administrative studies. A qualifying research paper (QRP) will be required.
- The applicant must be in a successful leadership position in education, or must have held a leadership position successfully, or must demonstrate potential for leadership.
- There are two EdD streams: the *regular* and the *cohort-based* streams.
  - Regular EdD Stream: regular stream students are accepted every year and can register on a full-time or part-time basis.
  - Cohort-Based Stream: Cohorts are accepted every three years. Students move through the program as a cohort or unit.

**Program Requirements**

**Regular EdD Stream**
- 4.0 core full-course equivalents (FCE) as follows:
  - TPS 3040H
  - TPS 3041H
Degree Programs

- Two of TPS 3042H, TPS 3043H and TPS 3044H or equivalent
- 1.0 FCE at the 3000 level
- 1.0 additional FCE

- Successful completion of a portfolio that emphasizes reflective practice
- A thesis proposal hearing
- A doctoral thesis

Cohort-Based Stream

- 4.0 core full-course equivalents (FCE) as follows:
  - TPS 3040H
  - TPS 3041H
  - TPS 3025H
  - TPS 3042H
  - TPS 3047H
  - TPS 3044H Internship/Practicum in Educational Administration
  - 1.0 other FCE of which 0.5 FCE which must be at the 3000 level

- Successful completion of a portfolio that emphasizes reflective practice
- A thesis proposal hearing
- A doctoral thesis

Doctor of Philosophy

The PhD program in Educational Administration fosters the study of problems in the administration and leadership of educational programs. It best serves students who are committed to scholarship and research as a means for deepening their understanding of administrative action in schools or in other educational and service institutions. While experience in teaching and administration is not an essential prerequisite for admission, such experience provides a desirable background.

The PhD program may be taken on either a full-time or flexible-time basis. To be admitted on a flexible-time basis, applicants 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.

Minimum Admission Requirements

- General requirements listed in the OISE/UT Graduate Studies in Education Bulletin.
- University of Toronto MA degree or its equivalent, with standing equivalent to a University of Toronto A-.
- Students who have completed an appropriate master's degree that did not include a thesis or research project are required to complete a Qualifying Research Paper to a standard satisfactory to the PhD Admissions Committee. Before undertaking a qualifying research project, students should first consult the Program Coordinator.

Program Requirements

- Minimum 3.0 new full-course equivalents (FCE), of which 2.0 FCE normally must be TPS 3040H, TPS 3042H, TPS 3043H, and one elective advanced level (3000) course in Educational Administration.
- 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 specialization.
- PhD students are required to pass a comprehensive examination and a thesis proposal hearing.
- A thesis is required.

Courses

Not all courses are offered every year. Please consult OISE/UT’s Graduate Studies Course Schedule which lists the courses the Department will offer this year as well as those offered by other departments that may be taken for credit in your program.

Some sections of existing courses are offered off campus and by computer conferencing in order to make them available to students in localities far from Toronto.

Educational Administration

TPS 1003H Conducting Research in Educational Administration
TPS 1004H Research Literacy in Educational Administration
TPS 1005H The Computer in Educational Administration
TPS 1012H Organizational Culture and Decision Making
TPS 1016H School Program Development and Implementation
TPS 1018H Political Skill in the Education Arena
TPS 1019H Diversity and the Ethics of Educational Administration
TPS 1020H Teachers and Educational Change
TPS 1024H Critical Conversations: Philosophy, Educational Administration, and Educational Policy Studies
TPS 1025H School Effectiveness and School Improvement
TPS 1026H Evaluation of Professional Personnel in Education
TPS 1027H The Search for Educational Quality and Excellence in a Global Economy
TPS 1028H Policy Delivery and Schools
TPS 1029H Special Applications of the Administrative Process
TPS 1030H The Legal Context of Education
TPS 1036H Planning in Educational Organizations
TPS 1040H Educational Administration I: Introduction to Educational Administration: Policy, Leadership and Change
TPS 1041H Educational Administration II: Social and Policy Context of Schooling
TPS 1042H Educational Leadership and Cultural Diversity
TPS 1045H Language Policy Across the Curriculum
TPS 1047H Managing Changes in Classroom Practice
TPS 1048H Educational Leadership and School Improvement
TPS 1050H Themes and Issues in Policy, Leadership, Change, and Diversity
Degree Programs

TPS 1052H Individual Reading and Research in Educational Administration: Master’s Level
TPS 2006H Educational Finance and Economics
Students who have taken TPS 1017H, TPS 1841H are not eligible to take TPS 2006H
TPS 3017H Problems in the Finance and Economics of Education
TPS 3018H Governing Education: A Seminar on Politics
TPS 3020H Educational Change in the Post-Modern Age
TPS 3022H The Investigation of School Culture: An Examination of the Daily Life of Schools
TPS 3024H Field Studies in Educational Leadership
TPS 3025H Personal and Professional Values of Educational Leadership
TPS 3028H Project Development Studies
TPS 3029H Special Topics in Educational Administration
TPS 3030H Advanced Legal Issues in Education
TPS 3037H Strategic Planning in Educational Organizations
TPS 3040H Administrative Theory and Educational Problems I: People and Power in Organizations
TPS 3041H Administrative Theory and Educational Problems II: Doctoral Seminar on Policy Issues in Education
TPS 3042H Field Research in Educational Administration
TPS 3043H Survey Research in Educational Administration
TPS 3044H Internship/Practicum in Educational Administration
TPS 3045H Educational Policy and Program Evaluation
TPS 3046H Gender Issues in Educational Leadership
TPS 3047H Research Seminar on Leadership and Educational Change
TPS 3052H Individual Reading and Research in Educational Administration: Doctoral Level
TPS 3055H Democratic Values, Student Engagement and Democratic Leadership
JCT 2000H Proseminar in Educational Evaluation, Measurement and Policy Analysis
JCT 2001H Using Classroom Assessment to Enhance Student Learning

Program Requirements
- 4.0 full-course equivalents (FCE)
- General written comprehensive examination
- Thesis. The number of FCE may be reduced to 3.0 for students with prior undergraduate or graduate degrees that are relevant to the study of Higher Education. Additional courses may be required of some applicants. All students are required to complete TPS 1803Y Recurring Issues in Postsecondary Education, and a comprehensive examination.

Master of Education

Minimum Admission Requirements
- General requirements listed in the OISE/UT Graduate Studies in Education Bulletin.

Program Requirements
- Students in Higher Education pursue the MEd Option I degree program - 5.0 full-course equivalents (FCE) plus a comprehensive examination.
- All students are required to complete TPS 1803Y Recurring Issues in Postsecondary Education.
- Health Professional Education. Students in the health professional education specialization normally register in the MEd Option II program – 4.0 FCE plus a major research project/paper. This option, if pursued on a full-time basis, cannot be completed in less than 12 months. A comprehensive examination is required. Additional information on the health professional education specialization may be obtained from Professor Linda Muzzin.

Doctor of Education

Minimum Admission Requirements
- General requirements listed in the OISE/UT Graduate Studies in Education Bulletin.
- 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.

Program Requirements
- Minimum of 4.0 full-course equivalents (FCE) including:
  - TPS 1803Y Recurring Issues in Postsecondary Education (1.0 FCE)
  - at least 1.0 other FCE in Higher Education
  - 0.5 FCE in research methodology approved by the faculty advisor
  - 0.5 FCE selected either in Higher Education or in another graduate program at OISE/UT, or, with the approval of the faculty advisor, in another graduate department at the University of Toronto

Higher Education

Master of Arts

Minimum Admission Requirements
- General requirements listed in the OISE/UT Graduate Studies in Education Bulletin.
- Four-year University of Toronto bachelor's degree with a minimum mid-B standing in the final year, or its equivalent.
Degree Programs

- Supervised applied research practicum (equivalent to 0.5 FCE)
- Collaborative pro-seminar (0.5 FCE)
- Written General Comprehensive Examination (if not completed previously);
- Doctoral Specialization Examination;
- Thesis reporting the results of original research on an applied topic in postsecondary education.

Doctor of Philosophy

Minimum Admission Requirements
- General requirements listed in the OISE/UT Graduate Studies in Education Bulletin.
- 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.

Program Requirements
- Minimum 3.0 full-course equivalents (FCE) including:
  - TPS 1803Y Recurring Issues in Postsecondary Education (1.0 FCE)
  - at least 1.0 other FCE in Higher Education
  - 0.5 FCE in research methodology approved by the faculty advisor
  - 0.5 FCE selected either in Higher Education or in another graduate program at OISE/UT, or, with the approval of the faculty advisor, in another graduate department at the University of Toronto
- Written General Comprehensive Examination (if not completed previously).
- Doctoral Specialization Examination;
- Thesis reporting the results of original research in postsecondary education.

Courses
Not all courses are offered every year. Please consult OISE/UT’s Graduate Studies Course Schedule which lists the courses the Department will offer this year as well as those offered by other departments that may be taken for credit in your program.

Some sections of existing courses are offered off campus and by computer conferencing in order to make them available to students in localities far from Toronto.

Higher Education
TPS 1801H The History of Higher Education in Canada: An Overview
TPS 1802Y Theory in Higher Education
TPS 1803Y Recurring Issues in Postsecondary Education
TPS 1804Y Issues in Medical/Health Professional Education
TPS 1805H The Community College
TPS 1806H Systems of Higher Education

TPS 1807H Strategic and Long-Range Planning for Postsecondary Systems
TPS 1808H Research in Health Professional Education
TPS 1809H Administration of Colleges and Universities
TPS 1810H Evaluation of Knowledge, Clinical Competence, and Professional Behaviour in the Health Professions
TPS 1811H Institutional Research and Planning
TPS 1812H Education and the Professions
TPS 1813H Issues in Cognitive and Educational Psychology: Implications for Health Professional Education
TPS 1814H Curriculum in Institutions of Higher Education
TPS 1815H Teaching in Institutions of Higher Education
TPS 1817H Nurturing Professional Education
TPS 1818H Educational Development: Examination of Strategies for Improving Teaching and Learning in Postsecondary Institutions
TPS 1819H Governance in Higher Education
TPS 1820H Special Topics in Higher Education: Master’s Level
TPS 1821H Institutional Differentiation in Postsecondary Education
TPS 1822H The Idea of the University and the College
TPS 1824H The Planning of Facilities in Higher Education
TPS 1825H Comparative Education: Theory and Methodology
TPS 1826H Comparative Higher Education
TPS 1827H The Politics of Higher Education
TPS 1828H Evaluation in Higher Education
TPS 1832H East Asian Higher Education
TPS 1833H Academic Capitalism: Higher Education with a Corporate Agenda
TPS 1834H Qualitative Research in Higher Education
TPS 1837H Environmental Health, Transformative Higher Education and Policy Change: Education Toward Social and Ecosystem Healing
TPS 1838H Continuing Education
TPS 1839H Administration of Technology in Higher Education
TPS 1842H Higher Education and the Labour Market
TPS 1843H Higher Education and the Law
TPS 1852H Individual Reading and Research in Higher Education: Master’s Level
TPS 2006H Educational Finance and Economics (Students who have taken TPS 1017H, TPS 1841H are not eligible to take TPS 2006H)
TPS 3806H Case Studies in Comparative Higher Education
TPS 3810H International Academic Relations
TPS 3820H Special Topics in Higher Education: Doctoral Level
TPS 3852H Individual Reading and Research in Higher Education: Doctoral Level

396 Theory and Policy Studies in Education
History and Philosophy of Education

There are two separate fields in the History and Philosophy of Education:
1. History of Education
2. Philosophy of Education

Master of Arts

History of Education

Minimum Admission Requirements
• General requirements listed in the OISE/UT Graduate Studies in Education Bulletin.
• Four-year University of Toronto bachelor’s degree, or its equivalent, with a major in history

Program Requirements
• 3.0 full-course equivalents (FCE) plus a thesis.
• Completion of TPS 1419H Historiography and the History of Education and TPS 1440H An Introduction to Philosophy of Education is mandatory for students in this program.
• Normally, 1.5 FCE of the remaining 2.0 FCE must be selected from the History of Education course menu. (See the OISE/UT Graduate Studies in Education Bulletin for details.) In cases where a student has already taken a course deemed equivalent to TPS 1440H, another philosophy course may be substituted. In consultation with the faculty advisor, this course should be chosen to complement the student’s primary focus in history.

Philosophy of Education

Minimum Admission Requirements
• General requirements listed in the OISE/UT Graduate Studies in Education Bulletin.
• Four-year University of Toronto bachelor’s degree, or its equivalent, with a major in philosophy.

Program Requirements
• 3.0 full-course equivalents (FCE) plus a thesis.
• Completion of TPS 1440H An Introduction to Philosophy of Education is mandatory (unless a course deemed equivalent has already been taken).
• In addition, one course in history is also mandatory, normally TPS 1419H Historiography and the History of Education. In cases where a student has already taken a course deemed equivalent to TPS 1419H, another history course may be substituted. In consultation with the faculty advisor, this course should be chosen to complement the student’s primary focus in philosophy.
• Normally, 1.5 FCE of the remaining 2.0 FCE must be selected from the Philosophy of Education course menu. (See the OISE/UT Graduate Studies in Education Bulletin for details.) Upon approval, courses from other departments, including the Graduate Department of Philosophy, may be substituted for Philosophy of Education courses.
• Applicants with undergraduate majors in related social science and humanities disciplines are normally required to take some additional courses.

Master of Education

History of Education

Minimum Admission Requirements
• General requirements listed in the OISE/UT Graduate Studies in Education Bulletin.

Program Requirements
• The MEd degree in the History and Philosophy of Education Program - History of Education field may be pursued under either Option II (4.0 full-course equivalents (FCE) plus a major research project/paper) or Option IV (5.0 FCE).
  o Students enrolled in Option II are expected to complete at least 2.0 FCE from the History of Education course menu.
  o Students enrolled in Option IV are expected to complete at least 2.5 FCE from the History of Education course menu. (See the OISE/UT Graduate Studies in Education Bulletin for a list of History of Education courses.)
• Completion of TPS 1460H History and Educational Research and TPS 1440H An Introduction to Philosophy of Education is mandatory in both options. In cases where a student has already taken a course deemed equivalent to TPS 1440H, another philosophy course may be substituted. In consultation with the faculty advisor, this course should be chosen to complement the student’s primary focus in history.

Philosophy of Education

Minimum Admission Requirements
• General requirements listed in the OISE/UT Graduate Studies in Education Bulletin.

Program Requirements
• The MEd degree in the History and Philosophy of Education Program - Philosophy of Education field may be pursued under either Option II (4.0 full-course equivalents (FCE) plus a major research project/paper) or Option IV (5.0 FCE).
  o Students enrolled in Option II are expected to complete at least 2.0 FCE from the Philosophy of Education course menu.
  o Students enrolled in Option IV are expected to complete at least 2.5 FCE from the Philosophy of Education course menu. (See the OISE/UT Graduate Studies in Education Bulletin for a list of Philosophy of Education courses.)
• Completion of TPS 1440H An Introduction to Philosophy of Education is mandatory in both options (unless a course deemed equivalent has already been taken).
Degree Programs

- In addition, for both options one course in history is also mandatory, normally TPS 1419H Historiography and the History of Education. In cases where a student has already taken a course deemed equivalent to TPS 1419H, another history course may be substituted. In consultation with the faculty advisor, the substituted course should be chosen to complement the student’s primary focus in philosophy.

Doctor of Education

History of Education

The EdD degree in the History and Philosophy of Education Program - History of Education field is designed for career educators who wish to engage in the in-depth study of a problem or topic related to professional practice.

Minimum Admission Requirements

- General requirements listed in the OISE/UT Graduate Studies in Education Bulletin.

Program Requirements

- Students who have completed a master’s degree (MEd or MA) in the History and Philosophy of Education Program - History of Education field must complete 4.0 full-course equivalents (FCE), a year of full-time study on campus, and a thesis. Preferably, the year of full-time study should occur late in the degree program and should be devoted primarily to thesis research and writing.
- Students who have not completed a master’s (MEd or MA) degree in the History and Philosophy of Education Program - History of Education field must complete TPS 1440H An Introduction to the Philosophy of Education as part of their 4.0 FCE. In cases where a student has already taken a course deemed equivalent to TPS 1440H, another philosophy course may be substituted. In consultation with the faculty advisor, this course should be chosen to complement the student’s primary focus in history.
- The core program includes two mandatory EdD seminars (TPS 3490H EdD Seminar in the History of Education I and TPS 3491H EdD Seminar in the History of Education II), normally taken during the year of full-time study. Course TPS 1419H Historiography and the History of Education is a requirement for students in this program. The remaining courses are selected by the student in consultation with the faculty advisor and may be taken before or after the year of required full-time study. Students are strongly encouraged, though not required, to take at least 1.0 FCE before the year of full-time study.
- All EdD students are required to take a comprehensive examination.

Philosophy of Education

The EdD degree program in the History and Philosophy of Education Program - Philosophy of Education field is designed for career educators who wish to engage in the in-depth study of a problem or topic related to professional practice.

Minimum Admission Requirements

- General requirements listed in the OISE/UT Graduate Studies in Education Bulletin.

Program Requirements

- Applicants with specializations in their master’s degree programs other than Philosophy of Education are required to take additional courses either as prerequisites to admission or as part of their program.
- Applicants without a master’s thesis or equivalent must submit a Qualifying Research Paper, which must be approved by two faculty members prior to registration in the program.
- Students who have completed a master’s degree (MEd or MA) in the History and Philosophy of Education Program - Philosophy of Education field must complete 4.0 full-course equivalents (FCE) (some or all of which may be taken part-time), a year of required full-time study on campus, and a thesis. Preferably, the year of full-time study should occur late in the degree program and should be devoted primarily to thesis research and writing.
- All EdD students are required to take a comprehensive examination.
- Core program includes two mandatory EdD seminars (TPS 3480H EdD Seminar in the Philosophy of Education I and TPS 3481H EdD Seminar in the Philosophy of Education II), normally taken during the year of required full-time study, and course TPS 1440H An Introduction to Philosophy of Education, unless it, or an equivalent, has been taken previously.
- Students who have not completed a master’s (MEd or MA) degree in the History and Philosophy of Education Program - Philosophy of Education field must complete TPS1419H Historiography and the History of Education, unless it, or an equivalent, has been taken previously. In consultation with the faculty advisor, this course should be chosen to complement the student’s primary focus in history.
- A minimum of 2.5 FCE should normally be taken from the Philosophy of Education course menu, selected in consultation with the faculty advisor. (See the OISE/UT Graduate Studies in Education Bulletin for a list of Philosophy of Education courses.) Courses from other departments, including the Graduate Department of Philosophy, may, upon approval, be substituted for Philosophy of Education courses. Students are strongly encouraged, though not required, to take at least 1.0 FCE before the year of required full-time study.
Degree Programs

Doctor of Philosophy

History of Education

Minimum Admission Requirements

• General requirements listed in the OISE/UT Graduate Studies in Education Bulletin.
• University of Toronto MA degree in the History and Philosophy of Education Program - History of Education field, or its equivalent, including a thesis or equivalent major research paper.

Program Requirements

• 3.0 full-course equivalents (FCE) plus a thesis.
• If the master's degree did not include a thesis (or equivalent), a Qualifying Research Paper must be submitted and approved by two faculty members before registration in the degree program.
• Applicants who do not hold a University of Toronto MA degree in the History and Philosophy of Education Program - History of Education field or its equivalent will be required to establish equivalency with the OISE/UT master's program. Usually this entails completion of TPS 1419H Historiography and the History of Education and TPS 1440H An Introduction to the Philosophy of Education within the minimum 3.0 FCE requirement for the PhD. In cases where a student has already taken a course deemed equivalent to TPS 1419H, another history course may be substituted. In consultation with the faculty advisor, this course should be chosen to complement the students' primary focus in history.
• All PhD students are required to write a comprehensive examination.

Philosophy of Education

Minimum Admission Requirements

• General requirements listed in the OISE/UT Graduate Studies in Education Bulletin.
• University of Toronto master's degree in the History and Philosophy of Education Program - Philosophy of Education field or its equivalent (including a thesis or equivalent major research paper)

Program Requirements

• 3.0 full-course equivalents (FCE) plus a thesis.
• If the master's degree did not include a thesis (or equivalent), a Qualifying Research Paper must be submitted and approved by two faculty members before registration in the degree program.
• Applicants who do not hold a University of Toronto master's degree in the History and Philosophy of Education Program - Philosophy of Education field or its equivalent will be required to establish equivalency with the OISE/UT master's program. Usually this entails completion of TPS 1440H An Introduction to Philosophy of Education (unless a course deemed equivalent has already been taken previously) and TPS 1419H Historiography and the History of Education within the minimum 3.0 FCE requirement for the PhD. In cases where a student has already taken a course deemed equivalent to TPS 1419H, another philosophy course may be substituted. In consultation with the faculty advisor, this course should be chosen to complement the students' primary focus in philosophy.
• All students must complete at least 2.0 FCE from the Philosophy of Education course menu, including TPS 1440H. (See the OISE/UT Graduate Studies in Education Bulletin for a list of Philosophy of Education courses.) Courses should be selected in consultation with the faculty advisor. Courses from other departments, including the Graduate Department of Philosophy, may, upon approval, be substituted for Philosophy of Education courses.
• All PhD students are required to write a comprehensive examination.

Courses

Not all courses are offered every year. Please consult OISE/UT's Graduate Studies Course Schedule which lists the courses the Department will offer this year as well as those offered by other departments that may be taken for credit in your program. Some sections of existing courses are offered off campus and by computer conferencing in order to make them available to students in localities far from Toronto.

History of Education

TPS 1400H The Origins of Modern Schooling I: Problems in Education Before the Industrial Revolution
TPS 1401H The Origins of Modern Schooling II: Problems in Nineteenth- and Twentieth-Century Educational History, Focus on Canada and the U.S.A.
TPS 1402H History of Modern European Education
TPS 1403H History of Education in Canada
TPS 1404H History of Rural Education in Canada
TPS 1405H History of Education and Society: Selected Topics
TPS 1406H Sexuality and the History of Education
TPS 1410H Schooling in the Movies: Education as Reflected in Hollywood Films
TPS 1415H The History of the Teaching Profession
TPS 1416H Ontario Education
TPS 1419H Historiography and the History of Education
TPS 1420H European Popular Culture and the Social History of Education: I
TPS 1422H Education and Family Life in the Modern World I
TPS 1423H The History of the Family in Canada
TPS 1424H Religion, Ideology, and Social Movements in the History of North American Education
TPS 1426H The History of Gender and Education in Canada
# Degree Programs

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# Philosophy of Education

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<td>TPS 1465H</td>
<td>Special Topics in Philosophy of Education</td>
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# Graduate Faculty

### Full Members

- Sandra Acker - BA, MA, PhD
- Stephen Anderson - PhD
- Jorge Balan - PhD
- Nina Bascia - BA, EdS, MA, PhD
- Megan Boler - BA, PhD (Associate Chair; Program Coordinator, Philosophy)
- Dwight Boyd - BA, MEd, EdD
- Peter Dietsche - BSc, MA, PhD
- Lorna Earl - PhD
- Maureen Ford - BA, MA, PhD
- Jane Gaskell - BA, MEd
- Denis Hache - BA, BEd, MEd, MBA, PhD
- Ruth Hayhoe - BA, MA, PhD
- Angela Hildyard - BSc, MA, PhD
- Brian Hodges - BA, MEd, MD, PhD
- Glen Jones - BA, BEd, MEd, PhD
- Reva Joshee - BA, MA, PhD (Chair)
- Brent Kilbourn - BS, MA, PhD
- Daniel Lang - BA, MA, PhD
- Kenneth Leithwood - BA, BPE, MPE, PhD
- Benjamin Levin - BA, MEd, PhD
- David Levine - BA, MA, PhD
- Lorelei Lingard - BA, MA, PhD
- Jamie-Lynn Magnusson - BA, MA, PhD (Program Coordinator, Higher Education)
Degree Programs

Theory and Policy Studies in Education 401
Women and Gender Studies  

**Faculty Affiliation**  
Arts and Science

**Degree Programs Offered**  
Women and Gender Studies - MA

**Overview**  
The Women and Gender Studies Institute (WGSI) offers a program leading to the Master of Arts degree in Women and Gender Studies. The Master's Program in Women and Gender Studies (MWGS) focuses on transnationality and gender. This perspective explores the global processes in which women's and men's lives, gender relations, gendered subjectivities and sexualities are situated; it illuminates 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 gender, race, class and sexuality. The program welcomes applications from international students.

**Collaborative Programs Offered**  
The WGSI's MA degree program participates in the following collaborative programs:

1. Addiction Studies, see p. 406
   • Women and Gender Studies, MA

2. Aging, Palliative and Supportive Care Across the Life Course, see p. 408
   • Women and Gender Studies, MA

3. Asia-Pacific Studies, see p. 413
   • Women and Gender Studies, MA

4. Bioethics, see p. 416
   • Women and Gender Studies, MA

5. Environment and Health, see p. 439
   • Women and Gender Studies, MA

6. Environmental Studies, see p. 443
   • Women and Gender Studies, MA

7. International Relations, see p. 458
   • Women and Gender Studies, MA

8. Sexual Diversity Studies, see p. 469
   • Women and Gender Studies, MA

9. South Asian Studies, see p. 471
   • Women and Gender Studies, MA

10. Women's Health, see p. 478
    • Women and Gender Studies, MA

**Contact and Address**  
Web: www.utoronto.ca/wgsi  
E-mail: grad.womenstudies@utoronto.ca  
Telephone: 416-978-3668  
Fax: 416-946-5561

Women and Gender Studies Institute  
Room 2036, Wilson Hall, New College  
University of Toronto  
40 Willcocks Street  
Toronto, Ontario M5S 1C6  
Canada

**Degree Programs**  
**Master of Arts**

**Minimum Admission Requirements**  
- Four-year University of Toronto bachelor's degree, or its equivalent, 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, three letters of recommendation, transcripts from all post-secondary institutions, a curriculum vitae, and a writing sample.

**Program Requirements**  
- The student's program of study must be approved by the institute. Total of 4.0 full-course equivalents (FCE) as follows:
  - 1.5 core full-course equivalents (FCE) in Women and Gender Studies (WGS 1000H, WGS 1001H, and WGS 1002H)
  - 0.5 elective FCE in Women and Gender Studies (either a special topics seminar [WGS 1003H or WGS1004H], a practicum [WGS1006H], or an independent research/reading course [WGS1007H])
  - 1.0 FCE Master's Research Paper (WGS 1005Y)
  - 1.0 FCE (1 year-long or two half-year courses) offered by other departments and chosen in consultation with your faculty advisor
- The MA degree program is a full-time, twelve-month program and is not offered on a part-time basis.

**Courses**  
WGS 1000H Theories, Histories, Feminisms  
WGS 1001H Feminism, Transnationalism and Postcolonialism  
WGS 1002H Feminist Methodologies and Epistemologies  
WGS 1003H Special Topics in Feminist Studies  
WGS 1004H Special Topics in Feminist Theory  
WGS 1005Y MA Research Paper  
WGS 1006H Practicum  
WGS 1007H Directed Research/Reading
Degree Programs

Graduate Faculty

Full Members
Mary (Jacqui) - Alexander - BSW, MA, PhD
Kay Armatage - BA, MA, PhD
Bonnie McElhinny - BA, MA, PhD (Director)
Kathryn Morgan - BA, MA, MEd, PhD
Michelle Murphy - BA, PhD (Coordinator of Graduate Studies)
Mary Nyquist - BA, MA, PhD
Kerry Rittich - MusBac, LLB, SJD
Ashwini Tambe - BA, MS, PhD
Judith Taylor - BA, PhD
Alissa Trotz - BA, MPhil, PhD

Associate Members
June Larkin - BA, MEd, PhD
Collaborative Programs

Aboriginal Health

Lead Faculty
Medicine

Degree Programs Offered
Adult Education and Counselling Psychology – MA, MEd, EdD, PhD
Anthropology – MA, MSc, PhD
Geography – MA, MSc, PhD
Medical Science – MSc, PhD
Nursing Science – MN, PhD
Nutritional Sciences – MHSc, MSc, PhD
Public Health Sciences – MHSc, PhD
Sociology and Equity Studies in Education – MA, MEd, EdD, PhD

Overview
The Collaborative Program in Aboriginal Health involves the graduate programs listed above. The program is offered in collaboration with the Faculty of Arts and Sciences’ Aboriginal Studies Program. The main objective of the program is to provide graduate training in Aboriginal health research and practice while enhancing mutually beneficial relationships with Aboriginal communities and organizations.

Contact and Address
E-mail: kue.young@utoronto.ca
Telephone: (416) 978-0298
Fax: (416) 946-8055

Aboriginal Health Collaborative Program
c/o Department of Public Health Sciences
University of Toronto
Room 547, 155 College Street
Toronto, Ontario M5T 3M7
Canada

Degree Programs
Master’s Degrees

Minimum Admission Requirements
• Students who wish to enrol in a collaborative program must apply to and be admitted to both the collaborative program and a graduate degree program in one of the collaborating departments.
• Applicants must submit to the Program Committee of the Collaborative Program in Aboriginal Health:
  o A personal statement, in the form of a letter no longer than three pages to describe relevant personal and/or professional experiences, a career plan, and motivation in seeking advanced training in Aboriginal health. The nature of any relationship with an Aboriginal community/organization that already exists or to be developed should also be described.
  o Photocopies of application materials submitted to their home unit including curriculum vitae, transcripts, and letters of reference.

Program Requirements
• All master’s students in the program will take a core course (0.5 full-course equivalent (FCE)) listed below.
• In home graduate units where a thesis or major research paper is required, it must deal with an Aboriginal health topic. At least one member of the student’s thesis committee should be a core faculty member of the Collaborative Program.
• In home graduate units that do not have a thesis requirement, students must undertake a practicum or equivalent in an Aboriginal health topic, supervised by a core faculty member of the Collaborative Program.
• Students must participate in the Research Seminar Series, held monthly, as well as participate in at least one National/Regional Workshop.
• Students must complete the requirements of the Collaborative Program in addition to those requirements for the degree program in their home graduate unit.

Doctoral Degrees

Minimum Admission Requirements
• Students who wish to enrol in a collaborative program must apply to and be admitted to both the collaborative program and a graduate degree program in one of the collaborating departments.
• Applicants must submit to the Program Committee of the Collaborative Program in Aboriginal Health:
  o A personal statement, in the form of a letter no longer than three pages to describe relevant personal and/or professional experiences, a career plan, and motivation in seeking advanced training in Aboriginal health. The nature of any relationship with an Aboriginal community/organization that already exists or to be developed should also be described.
  o Photocopies of application materials submitted to their home unit including curriculum vitae, transcripts, and letters of reference.

Program Requirements
• The requirements are the same as for the master’s program listed above.
• Students who have previously taken one of the core courses (0.5 FCE) during their master’s program are required to take a different course during their doctoral program.
• Students participate in a new Research Seminar Series and at least one National/Regional Workshop.
Core Courses
AEC 1275H Special Topics in Counselling Psychology (Master's): Integrating Traditional Healing into Counselling Psychology and Therapy
CHL 5421H Aboriginal Health
NUR 1014H Politics of Aboriginal Health

Program Committee
Eileen Antone - BA, BEd, MEd, EdD - Adult Education & Counselling Psychology
Suzanne Stewart - PhD - Adult Education & Counselling Psychology
Krystyna Sieciechowicz - BA, MA, PhD - Anthropology
Loraine Marrett - BMath, PhD - Medical Science
Anthony Hanley - MSc, PhD - Nutritional Sciences
Kue Young - BSc, MD, MSc, PhD, FRCP, LMCC - Public Health Sciences (Director)
Martin Cannon - PhD - Sociology & Equity Studies in Education
Collaborative Programs

Addiction Studies

Lead Faculty
Medicine

Degree Programs Offered
- Adult Education and Counselling Psychology – MA, MEd, EdD, PhD
- Anthropology – MA, MSc, PhD
- Biomedical Engineering – MAsc, PhD
- Criminology – MA, PhD
- Exercise Sciences – MSc, PhD
- Information Studies – MISt, PhD
- Medical Science – MSc, PhD
- Nursing Science – MN, PhD
- Pharmacology – MSc, PhD
- Pharmaceutical Sciences – MSc, PhD
- Psychology – MA, PhD
- Public Health Sciences – MSc, PhD
- Social Work – MSW, PhD
- Sociology – MA, PhD
- Women and Gender Studies – MA

Overview
The graduate programs listed above; in collaboration with the Centre for Addiction and Mental Health, the Canadian Centre on Substance Abuse, and the Ontario Tobacco Research Unit; participate in the Collaborative Program in Addiction Studies at the University of Toronto. The purpose of the program is to develop and integrate graduate training in the multidisciplinary field of addictions, an area that includes the use and abuse of alcohol, tobacco, and psychoactive substances, as well as gambling and other addictive behaviours. Master’s programs requiring a thesis, practicum, or research paper, and Doctor of Philosophy programs are included. Upon fulfillment of the program requirements, transcripts issued by the School of Graduate Studies will denote completion of the Collaborative Program in Addiction Studies.

Contact and Address
Web: www.phs.utoronto.ca/c_copas.htm
E-mail: robert_mann@camh.net
Telephone: (416) 535-8501 ext. 4496

R.E. Mann, Director
Collaborative Program in Addiction Studies
Centre for Addiction and Mental Health
33 Russell Street, Room 2035
Toronto, Ontario M5S 2S1
Canada

Degree Programs

Master’s Degrees

Minimum Admission Requirements
- Applicants must apply to and be admitted to both the Collaborative Program and a graduate degree program in one of the collaborating departments.

Program Requirements
- Students must meet all requirements of their home department in terms of course work and thesis work, or equivalent.
- Master’s students in the collaborative program are required to take PAS 3700H Multidisciplinary Aspects of Addictions, plus 0.5 full-course equivalent (FCE) selected from the list of approved courses presented below or an approved directed reading course.
- The student’s thesis must deal with a subject in the field of addictions. The thesis is supervised and evaluated in the same manner as others in the home department, but normally involves, as appropriate, supervisory and examining professors from other disciplines represented in the collaborative program. In collaborating departments that do not require a thesis, a practicum or major research paper will be accepted instead of a thesis, as long as the topic or focus is directly related to addictions. In collaborating departments that do not have a thesis or equivalent requirement, students must take a third 0.5 FCE from the list of approved electives.

Doctoral Degrees

Minimum Admission Requirements
- Applicants who wish to enrol in the Collaborative Program must apply to and be admitted to both the Collaborative Program and a graduate degree program in one of the collaborating departments.

Program Requirements
- PhD students in the collaborative program are required to take PAS 3700H Multidisciplinary Aspects of Addictions, if they have not already done so, plus an additional 0.5 FCE (not taken previously) from the approved listing of courses presented below or an approved directed reading course.
- Students must meet all requirements of their home department in terms of course work and thesis work, or equivalent.
- The student’s thesis must deal with a subject in the field of addictions. The thesis is supervised and evaluated in the same manner as others in the home department, but normally involves, as appropriate, supervisory and examining professors from other disciplines represented in the collaborative program. In collaborating departments that do not require a
thesis, a practicum or major research paper will be accepted instead of a thesis, as long as the topic or focus is directly related to addictions. In collaborating departments that do not have a thesis or equivalent requirement, students must take a third 0.5 FCE from the list of approved electives.

- Upon fulfilment of the program requirements, transcripts issued by the School of Graduate Studies will denote completion of the Collaborative Program in Addiction Studies.

Courses

The following courses in the Collaborative Program in Addiction Studies are offered by the participating departments for the current academic year.

- PAS 3700H Multidisciplinary Aspects of Addiction
- PAS 3701H Advanced Research Issues in Addictions
- CHL 5119H Social and Political Perspectives on Drugs and Addictions
- CHL 5417H Tobacco and Health: From Cells to Society
- JPM 1005Y Behavioural Pharmacology
- MSC 1085H Molecular Approaches to Mental Health and Addictions
- PSY 2703H The Psychology of Addictions
- SOC 6123H Sociology of Addiction
- SWK 4616H Drug Dependence: Treatment Approaches

Program Committee

Richard Frecker - BSc, MD, PhD, LMCC - Biomedical Engineering
N. Scot Wortley - BA, MA, PhD - Criminology
Wendy Duff - BA, MLS, PhD - Information Studies
Peter Carlen - MD, FRCP(C) - Medical Science
Carles Muntaner - MD, PhD - Nursing Science
Beth Sproule - BScPhm, PharmD - Pharmaceutical Sciences
John Cunningham - BSc, MA, PhD - Psychology
Robert Mann - BA, MASc, PhD - Public Health Sciences

(Director)

Jurgen Rehm - PhD - Public Health Sciences
Marilyn Herie - BA, MSW, PhD - Social Work
Lorne Tepperman - BA, MA, PhD - Sociology
Patricia Erickson - BA, MA, PhD - Centre for Addiction & Mental Health
Roberta Ferrence - BA, MA, PhD - Ontario Tobacco Research Unit
Collaborative Programs

Aging, Palliative and Supportive Care
Across the Life Course

Degree Programs

Master's Degrees

Minimum Admission Requirements

- Applicants must apply to a participating graduate unit and comply with the admission procedures of that unit. Applicants may apply concurrently to their participating graduate unit and to the Collaborative Program in Aging, Palliative and Supportive Care Across the Life Course.

- Applicants must forward the following to the Program Committee of the Collaborative Program in Aging, Palliative and Supportive Care Across the Life Course:
  a. a copy of the School of Graduate Studies Application form submitted to the participating graduate unit
  b. copies of official undergraduate and graduate transcripts from all institutions previously or currently attended
  c. a resume or curriculum vitae
  d. a letter explaining how their program of study and specific research interests relate to either option 1 in aging and the life course, or option 2 in palliative and supportive care

Program Requirements

- In addition to meeting the program requirements of their home department, students will be required to complete two courses (one core and one elective) for either of the two options. It is expected that the student's thesis or practicum (whichever is included in their program of study) would be in one of the two study option areas.

Doctoral Degrees

Minimum Admission Requirements

- Applicants must apply to a participating graduate unit and comply with the admission procedures of that unit.

- Applicants may apply concurrently to their participating graduate unit and to the Collaborative Program in Aging, Palliative and Supportive Care Across the Life Course.

- Applicants must forward the following to the Program Committee of the Collaborative Program in Aging, Palliative and Supportive Care Across the Life Course:
  a. a copy of the School of Graduate Studies Application form submitted to the participating graduate unit

Contact and Address

Web: www.aging.utoronto.ca
Telephone: (416) 978-0377
Fax: (416) 978-4771

Collaborative Program in Aging, Palliative and Supportive Care Across the Life Course
Suite 106, 222 College Street
University of Toronto
Toronto, Ontario M5T 3J1
Canada
b. copies of official undergraduate and graduate transcripts from all institutions previously or currently attended
c. a resume or curriculum vitae
d. a letter explaining how their program of study and specific research interests relate to either option 1 in aging and the life course, or option 2 in palliative and supportive care at the graduate level

Students may use copies of official documents (a. and b. above) for their application to the Collaborative Program in Aging, Palliative and Supportive Care Across the Life Course. These may be obtained from their home participating graduate unit.

• Two letters of reference (with specific mention of background in either aging/life course or palliative and supportive care).

Program Requirements
• In addition to meeting the program requirements of their home department, students will be required to complete two courses (one core and one elective) for either of the two options. It is expected that the student’s thesis or practicum (whichever is included in their program of study) would be in one of the two study option areas.

Courses

Core Courses for Option 1: Aging and the Life Course

Master's Level
AGE 2000H Principles of Aging

Doctoral Level
AGE 3000H Advanced Research Seminar in Aging and the Life Course (AGE 2000H is a prerequisite for entry into the doctoral level of the Collaborative Program)

Core Courses for Option 2: Palliative and Supportive Care

Master's Level
AGE 1000H Multidisciplinary Research Concepts in Palliative and Supportive Care

Doctoral Level
AGE 1500H Advanced Research Methodologies in Palliative and Supportive Care (AGE 1000H is a prerequisite for entry into the doctoral level of the Collaborative Program)

Elective Courses

AEC 1131H Special Topics in Adult Education: Alternative Methods of Researching Aging, Illness and Health
AGE 2500H Current Research Topics in Aging and the Life Course

DEN 1003Y Preventive Dentistry
EXS 5501H Physical Activity and Aging
NUR 1037H Aging and Place: Social and Policy Transitions
NUR 1056H Places, Programs, and People Who Provide Care
NUR 1058H Aging, Gender, and Equity
REH 1520H Physiological Factors Constraining Rehabilitation of the Elderly
REH 1620H Methodological Issues in Research on Aging and Health
REH 1640H Sociology of Disability
SLP 1533Y Aphasias
SLP 1534Y Motor Speech Disorders
SLP 2501H Special Topics in Communication Disorders
SLP 2502Y Specialized Study in Communication Disorders
SOC 6124H The Life Course in Modern Society
SOC 6707H Intermediate Data Analysis
SWK 4612H Social Work and Aging: Integrated Policy and Practice
SWK 4613H Social Work Practice with the Aged: Policy and Practice
SWK 4618H Special Issues in Gerontological Social Work

Requests to approve other courses as equivalent to fulfill program requirements may be made to the Program Committee.

Students taking either option may choose the masters core course in the other option as an elective.

Additional Electives for Option 2 Only
RLG 2018H Religion and Bioethics
RLG 2037H Religion and Healing
PHL 2145H How Bioethics Fits into Other Disciplines
PHL 2146Y Topics in Bioethics
HAD 5301H Intro to Clinical Epidemiology and Health
HAD 5730H Research Economics I: Economic Evaluation
HAD 5771H Resource Allocation Ethics
LAW 582H Privacy, Property, and the Human Body
LAW 338H Public Health Law
MSC 1051H Research Bioethics
MSC 1060H Biostatistics for Health Sciences
MSC 1090H Intro to Clinical Biostatistics
MSC 3003Y Empirical Approaches in Bioethics
NUR 1021H Nursing Ethics
NUR 1023H Critical Issues in the Design of Controlled Trials of Behavioural Health Care Interventions
NUR 1024H Foundations of Qualitative Inquiry
NUR 1025H Doing Qualitative Research
NUR 1026H Evaluating Interventions in Clinical Settings
NUR 1045H Theories of Pain: Impact on the Individual, Family, and Society
NUR 1046H Persistent Illness: Theoretical, Research, and Practice Implications
NUR 1050H Coping With Illness
NUR 1051H Assessment and Management of Common Responses to Illness
Collaborative Programs

Program Committee
Whitney Berta - PhD - Health Policy, Management & Evaluation
Lynn McDonald - BA, MSW, PhD - Life Course & Aging, Social Work
Gerald Devins - PhD - Medical Science
Gary Rodin - BSc, MD, FRCP - Medical Science (Co-Chair)
Alison Chasteen - BA, MA, PhD - Psychology
Gillian Einstein - PhD - Psychology (Co-Chair)
Ancient and Medieval Philosophy

Lead Faculty
Arts and Science

Degree Programs Offered
Classics – PhD
Medieval Studies – PhD
Philosophy – PhD

Overview
The graduate units listed above participate in the Collaborative Program for Ancient and Medieval Philosophy. The three units contribute courses and provide facilities and supervision of doctoral research. The program operates only at the doctoral level. The program is administered by a Program Committee which is drawn from all three units and is chaired by the Director who is a member of the committee.

Students who wish to enrol in the collaborative program must apply to and be admitted to both the collaborative program and a graduate degree program in one of the collaborating departments. Successful completion of the program permits the designation “Completed Collaborative Program in Ancient and Medieval Philosophy” to appear on the student’s transcript. Interested students should contact the director and the graduate coordinator of the unit in which they intend to register.

Contact and Address
Web: www.chass.utoronto.ca/~cpamp/
E-mail: cpamp@chass.utoronto.ca

Degree Programs
Doctor of Philosophy

Minimum Admission Requirements
• All applicants must meet the admission criteria of the unit through which they wish to enrol.

Program Requirements
• Students must fulfil the normal requirements of the Ph.D. in their home unit.
• Students will normally concentrate in either ancient or medieval philosophy, though it is not necessary to indicate such specialization formally. Their program of study must also be approved by the Program Committee and must include the following elements.
  o A language competence examination at the appropriate level (in at least one of Greek, Classical or Medieval Latin, or Arabic, as relevant) consisting of unseen translation must be successfully completed before the major field or area examinations are first attempted.

Program Committee
Brad Inwood - BA, MA, PhD, FRSC, Canada Research Chair - Classics (Director)
Lloyd Gerson - BA, MA, PhD - Philosophy
Peter King - PhD - Philosophy
Collaborative Programs

Ancient Greek and Roman History

Lead Faculty
Arts and Science

Degree Programs Offered
Classics (University of Toronto) – PhD
History (York University) – PhD

Overview
The Department of Classics at the University of Toronto and the Graduate Program in History at York University participate in the Joint Collaborative Program in Ancient Greek and Roman History. The program in History provides a broad historical context and methodological framework; Classics provides integration with other fields of study within the ancient world and access to linguistic, cultural, and ancillary disciplines. The program operates only at the doctoral level.

Students are enrolled in one of the two units. The program is administered by a Program Committee of four faculty members, two from each unit, one of whom is the Director. The two units contribute courses and provide facilities and supervision for research. Successful completion of the program permits the designation “Completed Joint Collaborative Doctoral Program in Ancient Greek and Roman History” to appear on the student’s transcript.

Interested students should contact the director of the joint collaborative program as well as the graduate coordinator of the unit in which they intend to register.

Contact and Address
Web: www.chass.utoronto.ca/classics/
E-mail: grad.classics@utoronto.ca
Telephone: (416) 978-5513
Fax: (416) 978-7174

Joint Collaborative Program in Ancient Greek and Roman History
Department of Classics
125 Queen’s Park Crescent
University of Toronto
Toronto, Ontario M5S 2C7
Canada

Degree Programs

Doctor of Philosophy

Minimum Admission Requirements
• Applicants must meet the admissions criteria of the unit through which they wish to enroll. Interested students register in the joint collaborative program with the approval of the Program Committee upon admission to the PhD program in either unit.
• A strong background in ancient history will be expected of all interested applicants, as will a level of preparation in the ancient languages and languages of research that is appropriate for the institution in which they register.

Program Requirements
• Students take the required seminars CLA 3020H, CLA 3200Y, as well as 1.5 full-course equivalents (FCE) in Greek and Roman history offered by the collaborating units. They will take all other courses to fulfill the requirements of either the Graduate Program in Classics at the University of Toronto or the Graduate Program in History at York University.
• Students take all examinations and meet all language requirements of their home unit.
• The Program Committee approves the major and minor fields of all students in the joint collaborative program; the major field must always be in Greek and Roman history, whereas the minor field will normally be in a complementary area of ancient history but can, where appropriate, be selected from other areas of study covered by the participating units.
• Students must complete the requirements of the collaborative program in addition to those of their home unit.

Courses
CLA 3020H Research Methods in Ancient History
(Credit/No Credit)
CLA 3200Y Work in Progress in Ancient History
(Credit/No Credit)

Program Committee
Benjamin Akrigg - BA, PhD - University of Toronto
Christer Bruun - BA, MA, PhD - University of Toronto (Director)
Jonathan Edmondson – BA, MA, PhD - York University
Jeremy Trevett - BA, MA, DPhil - York University
Asia-Pacific Studies

Lead Faculty
Arts and Science

Degree Programs Offered
Anthropology – MA, MSc
East Asian Studies – MA
Economics – MA
Geography – MA, MSc
History – MA
Management – MBA
Political Science – MA
Social Work – MSW
Sociology – MA
Women and Gender Studies – MA

Overview
The graduate programs listed above participate in the collaborative master's degree program in Asia-Pacific Studies at the University of Toronto. The collaborating units contribute courses and provide facilities and supervision for master's level research. This program is administered by a Program Committee chaired by a Program Director.

The collaborative master's degree program in Asia-Pacific Studies is designed to provide graduates with advanced training in a particular discipline and in the historical and social science studies of modern East and Southeast Asia. The major topics of emphasis are political economy, modern and contemporary social history, international relations, gender, political and social change, economic development, and cultural studies. The program contributes to the development of an integrated and interdisciplinary research community in Asia-Pacific Studies at the University.

Applicants are expected to meet the admission and degree requirements of both a home unit and the program in Asia-Pacific Studies. The collaborative master's degree program requirements can be met concurrently with, or in addition to, home unit requirements. Students who successfully complete the requirements of the collaborative program will receive the notation "Completed Collaborative Program in Asia-Pacific Studies" on their transcript in addition to the master's degree from the home unit.

Contact and Address
Web: www.utoronto.ca/asiapacific-ma
E-mail: asiapacific.ma@utoronto.ca
Telephone: (416) 946-8832
Fax: (416) 946-8838

Collaborative Master's Program in Asia-Pacific Studies
The Munk Centre for International Studies
Room 228N, 1 Devonshire Place
University of Toronto
Toronto, Ontario M5S 3K7
Canada

Degree Programs

Master's Degrees

Minimum Admission Requirements
• Applicants who wish to enrol in the Collaborative Program must apply to and be admitted to both the Collaborative Program and a graduate degree program in one of the collaborating departments.
• To be considered for admission to the collaborative master's degree program in Asia-Pacific Studies, applicants should have taken the equivalent of 4.0 full-course equivalents (FCE) with substantial Asia coverage by the time of application, or should have had substantial working or living experience in East or Southeast Asia.
• Applicants use the online application process and must forward the following to the Director of the collaborative master's degree program:
  o A hard copy Supplementary Application package (www.utoronto.ca/asiapacific-ma);
  o official undergraduate and graduate transcripts from all institutions attended previously and currently;
  o at least two letters of reference with specific mention of Asia-Pacific Studies background or Asia-Pacific experiences;
  o a statement of purpose;
  o a curriculum vitae.

Program Requirements
• ASI 1000Y
• A full-course equivalent (FCE) that may be in the form of one of the following:
  o a master's thesis
  o a major research paper in one of the FCEs related to Asia-Pacific
  o a thesis-equivalent research paper in an independent research 0.5 FCE. This option must be combined with an additional 0.5 FCE on Asia-Pacific listed on the Web site (www.utoronto.ca/asiapacific-ma).
• By the time of graduation from the master's degree program, every student is strongly expected to have a working knowledge of an East or Southeast Asian language as needed for his or her program of study.
Collaborative Programs

Courses
ASI 1000Y  Issues in Asia-Pacific Studies
Please consult the Asia-Pacific Studies Web site for courses offered by participating graduate units.

Program Committee
Hy Van Luong - BA, MA, PhD - Anthropology (Director)
Atsuko Sakaki - MA, PhD - East Asian Studies
Loren Brandt - BS, MS, PhD - Economics
Rachel Silvey - BA, MA, PhD - Geography
Nhung Tran - BA, MA, PhD - History
Joanne Oxley – BA, BSc, MBA, MA, PhD - Management
Jacques Bertrand - BA, MSc, MA, PhD - Political Science
Ka Tat Tsang - BSocSc, MSocSc, PhD - Social Work
Ping-Chun Hsiung - BA, MA, MA, PhD - Sociology
Bonnie McElhinny - BA, MA, PhD - Women & Gender Studies
Astrophysics

Lead Faculty
Arts and Science

Degree Programs Offered
Astronomy and Astrophysics – MSc
Physics – MSc

Overview
The graduate programs listed above participate in the Collaborative Master of Science Program in Astrophysics. This program fosters graduate education in Astrophysics, particularly in those areas of study that overlap traditional departmental boundaries.

Upon certification by the Director that all requirements of the collaborative program have been fulfilled, the participating home department will recommend the granting of the MSc degree, and the designation “Completed Collaborative Program in Astrophysics” will appear on the transcript.

Contact and Address
Web: www.astro.utoronto.ca/gradmsc.htm
E-mail: collab.astrophys@utoronto.ca
Telephone: (416) 946-3044
Fax: (416) 971-2026

Collaborative Program in Astrophysics
c/o C. C. Dyer
Department of Astronomy and Astrophysics
Room AB209, 50 St. George Street
University of Toronto
Toronto, Ontario M5S 3H4
Canada

Degree Programs

Master of Science

Minimum Admission Requirements
• Applicants who wish to enrol in the collaborative program must apply to and be admitted to both the collaborative program and a graduate degree program in one of the collaborating departments; this being either Astronomy and Astrophysics or Physics.
• Applicants must submit a supplementary brief application form to the collaborative program Director (available from either home department or the collaborative program office).

Program Requirements
• Students must meet all respective degree requirements of the School of Graduate Studies and the home department. This will normally require the equivalent of 5.0 full-courses equivalents as follows:
  o 1.5 or more FCE in Astronomy and Astrophysics
  o 1.5 or more FCE in Physics
  o 1.0 FCE from Astronomy and Astrophysics, Physics or a cognate department
  o a supervised research project in the field of astrophysics, equivalent to 1.0 FCE. The supervised research project and associated report will be completed under the regulations of AST 1500Y for students whose home department is Astronomy and Astrophysics and under the regulations of PHY 3400Y for students whose home department is Physics.
• Students must attend the seminar program of the Canadian Institute of Theoretical Astrophysics and prepare a report on a selection of these seminars for submission to the Director.
• Program requirements are normally completed within twelve months of entry to the program.

Program Committee
Charles Dyer - BSc, MSc, PhD - Astronomy & Astrophysics (Director)
John Sipe - BSc, MSc, PhD – Physics
Norman Murray - BSc, PhD, Canada Research Chair - Theoretical Astrophysics
Collaborative Program

Bioethics

Lead Faculty
Medicine

Degree Programs Offered
Health Policy, Management and Evaluation – MHSc, MSc, PhD
Law – LLM, SJD
Medical Science – MSc, PhD
Nursing Science – MN, PhD
Philosophy – MA, PhD
Public Health Sciences – MHSc, MSc, PhD
Rehabilitation Science – MSc, PhD
Religion – MA, PhD
Social Work – PhD

Overview
The graduate units listed above collaborate to offer master's and doctoral degree programs in Bioethics. Students with an interest in bioethics register in one of the graduate units associated with the Collaborative Program in Bioethics (CPB). Upon successful completion, the student receives the master's or PhD degree in their departmental area as well as a notation on the transcript reading “Completed Collaborative Program in Bioethics”.

Contact and Address
Web: www.utoronto.ca/jcb/education/grad_CPB.htm
E-mail: carmen.alfred@utoronto.ca
Telephone: (416) 978-0871
Fax: (416) 978-1911

Joint Centre for Bioethics (JCB)
88 College Street
University of Toronto
Toronto, Ontario M5G 1L4
Canada

Degree Programs

Master's Degrees

Admission Requirements
- Applicants to the Collaborative Program must apply to and be admitted to both the Collaborative Program and a graduate degree program in one of the collaborating departments.
- Students interested in the master's programs apply simultaneously to both the collaborating graduate unit and the CPB. Applications for admission to the CPB are considered only after admission to the collaborating graduate unit. If a student applies to more than one unit, a copy of each file must be submitted to the Secretary, Collaborative Program in Bioethics.
- Visit the CPB's Web site for the application form and details about supporting documentation. The application must be accompanied by:
  o CPB's application form;
  o an up-to-date curriculum vitae;
  o up-to-date copies of all transcripts;
  o a one-page letter of intent;
  o two letters of reference.
- Where a thesis is required, a note from the proposed supervisor indicating willingness to supervise the student should be submitted. The Joint Centre for Bioethics' Web site lists faculty and bioethicists who are available for advice relating to research proposals.

Program Requirements
- A student will be expected to meet the requirements of the home graduate unit as well as those of the Collaborative Program.
- Courses taken to complete degree requirements must include the following, which may be counted towards the degree in the home unit:
  o PHL 2145H - a review of the philosophical foundations of bioethics
  o MSC 3001Y - issues and case studies in bioethics
  o 0.5 full-course equivalent (FCE), normally from the home unit; see suggested list below
- Master's programs require either a thesis or equivalent research project as determined by the home unit. The thesis will be supervised by a thesis committee comprising a supervisor and two other members. The thesis is evaluated according to the procedures and standards of the home graduate unit and must fall within the broad area of bioethics. Non-thesis projects require supervision; requirements for such projects will be determined by the home unit.

Doctoral Degrees

Admission Requirements
- Applicants to the Collaborative Program must apply to and be admitted to both the Collaborative Program and a graduate degree program in one of the collaborating departments.
- Students interested in the doctoral programs apply simultaneously to both the collaborating graduate unit and the CPB. Applications for admission to the CPB are considered only after admission to the collaborating graduate unit. If a student applies to more than one unit, a copy of each file must be submitted to the Secretary, Collaborative Program in Bioethics.
- Visit the CPB's Web site for the application form and details about supporting documentation. The application must be accompanied by:
  o CPB's application form;
  o an up-to-date curriculum vitae;
  o up-to-date copies of all transcripts;
Collaborative Program

- a one-page letter of intent;
- two letters of reference.

For the doctoral thesis, a note from the proposed supervisor indicating willingness to supervise the student should be submitted. The Joint Centre for Bioethics' Web site lists faculty and bioethicists who are available for advice relating to research proposals.

Program Requirements
- A student will be expected to meet the requirements of the home graduate unit as well as those of the Collaborative Program.
- Courses taken to complete degree requirements must include the following, which may be counted towards the degree in the home unit:
  - PHL 2145H - a review of the philosophical foundations of bioethics
  - MSC 3001Y - issues and case studies in bioethics
  - 0.5 full-course equivalent (FCE), normally from the home unit; see suggested list below
- All doctoral candidates must complete a thesis.

Courses
- Please note that these courses are not offered every year. Consult each unit's Web site for details.

Health Policy, Management and Evaluation
- HAD 5011H Canada's Health Care System
- HAD 5306H Introduction to Health Care Research Methodology
- HAD 5741H Health Law
- HAD 5768H International Perspectives on Health Services Management
- HAD 5771H Resource Allocation Ethics

Law
- Participation in LAW courses is at the discretion of the Faculty of Law upon presentation, to the Faculty of Law Records Office, of a signed permission form from the student's home department. Note that preference is given to JD students and that many law courses are full by the end of the Faculty of Law add/drop period.
- LAW 267H Medical Law
- LAW 388H Public Health Law
- LAW 582H Privacy, Property and the Human Body

Medical Science
- MSC 1051H Research Bioethics
- MSC 3002Y Foundations Seminar II
- MSC 3003Y Empirical Approaches in Bioethics
- MSC 3004Y Ethics Committees and Consultation

Nursing Science
- NUR 1021H Nursing Ethics

Philosophy
- PHL 2131H Ethics
- PHL 2132H Seminar in Ethics
- PHL 2133H Topics in Ethics
- HPS 1105H Philosophy of Medicine

Public Health Sciences
- CHL 5111H Qualitative Research Methods
- CHL 5121H Genomics, Bioethics and Public Policy
- CHL 5401H Epidemiology Methods I
- CHL 5411H International Health
- CHL 5124H Public Health Ethics

Religion
- RLG 2007H Ethics, Society, and Technology
- RLG 2018H Religion and Bioethics

Social Work
- SWK 6101H Critical Evaluation of Social Work Practice
- SWK 6308H Designing and Implementing Quantitative Social Work Research

Program Committee
Douglas Kenneth Martin - BSc, PhD - Health Policy, Management & Evaluation
Trudo Lemmens - CandIur, LicIur, LLM - Law
Ross Edward Upshur - MA, MD, MSc, FRCP(C) - Medical Science
Elizabeth Peter-Hardtke - MscN, PhD - Nursing Science
Jennifer Hawkins - BA, MA, PhD - Philosophy
Abdallah Daar - DPhil, FRCP(Lond), FRCS, FRCS(C) - Public Health Sciences, Medical Science
Stephanie Nixon - BHSc(PT), BA, MSc, PhD - Rehabilitation Science
Barbara Secker - BA, MA, PhD – Rehabilitation Science
(Director)
David Novak - AB, MHL, rabbinical diploma, PhD - Religion
Sheila Neysmith - BSc, MSW, DSW - Social Work
Biomedical Engineering

Lead Faculty
Applied Science and Engineering

Degree Programs
Biochemistry – MSc, PhD
Biomedical Engineering – MASc, PhD
Chemical Engineering and Applied Chemistry – MASc, PhD
Dentistry – MSc, PhD
Electrical and Computer Engineering – MASc, PhD
Laboratory Medicine and Pathobiology – MSc, PhD
Materials Science and Engineering – MASc, PhD
Mechanical and Industrial Engineering – MASc, PhD
Medical Science – MSc, PhD
Pharmaceutical Sciences – MSc, PhD
Physics – MSc, PhD
Physiology – MSc, PhD
Rehabilitation Science – MSc, PhD

Overview
The graduate programs listed above participate in the Collaborative Program in Biomedical Engineering at the University of Toronto. This program offers the opportunity for research in biomedical engineering leading to master's and doctoral degrees. The Collaborative Program is housed in the Institute of Biomaterials and Biomedical Engineering (IBBME).

Biomedical engineering is a multidisciplinary field that integrates engineering with biology and medicine. It uses methods, principles, and tools of engineering, physical sciences, and mathematics to solve problems in the medical and life sciences. Biomedical engineering consists of the application of the concepts and methods of engineering and physics to the study of living systems, to the enhancement and replacement of those systems, to the design and construction of systems to measure basic physiological parameters, to the development of instruments, materials, and techniques for biological and medical practice, and to the development of artificial organs. By its nature the field is interdisciplinary and involves close collaboration between many departments of the University and associated hospitals.

Upon successful completion, the student receives the master's or PhD degree in their departmental area as well as a notation on the transcript reading "Completed Collaborative Program in Biomedical Engineering".

Contact and Address
Web: www.ibbme.utoronto.ca
E-mail: admissions.ibbme@utoronto.ca
Telephone: (416) 978-4841
Fax: (416) 978-4317

Master's Degrees

Admission Requirements
Applicants who wish to enrol in the Collaborative Program must apply to and be admitted to both the Collaborative Program and a graduate degree program in one of the collaborating departments.

Applicants must be graduates in dentistry, engineering, engineering science, medicine, or one of the physical or biological sciences and must be accepted in the Collaborative Program in Biomedical Engineering through one of the collaborating graduate departments (home departments) listed above.

Program Requirements
Students register in the School of Graduate Studies through their home department; they will meet all respective degree requirements as described by the School of Graduate Studies and the Program Committee.

As part of these requirements:
• Engineering and physical science students will be required to take a biological sciences course such as JPB 1022H (or an equivalent).
• Biological science students will be expected to take a physical sciences course such as JPB 1055H (or an equivalent).
• Students will be expected to take BME 1450H Bioengineering Science and pursue a thesis topic relevant to Biomedical Engineering.
• Students registered in a graduate degree program involving research are required to participate in two seminar courses: one of BME 1010H or BME 1011H Graduate Seminar series and JDE 1000H Ethics in Research.
• Students are required to have a supervisory committee approved by the Program Committee and consisting of a supervisor from IBBME, with a cross appointment in the home department, and other members from other collaborating departments as required.
• The program of study for each Master of Applied Science or Master of Science degree student registered in the Collaborative Program must meet the requirements of the collaborating department and will normally comprise at least 2.0 full-course equivalents (FCE) and a thesis in the biomedical field.
• The examination committee will be constituted according to procedures in the home graduate department and will include a member from that collaborating department.
Collaborative Program

Doctor of Philosophy
Admission Requirements
Applicants who wish to enrol in the Collaborative Program must apply to and be admitted to both the Collaborative Program and a graduate degree program in one of the collaborating departments.

- Applicants must be graduates in dentistry, engineering, engineering science, medicine, or one of the physical or biological sciences and must be accepted in the Collaborative Program in Biomedical Engineering through one of the collaborating graduate departments (home departments) listed above.
- Before PhD students are accepted, the Program Committee must be satisfied with the applicant's ability to undertake advanced graduate studies.

Program Requirements
A qualifying examination may be required by the collaborating department.
Direct transfer from a bachelor's degree to a PhD program is possible subject to the requirements of the collaborating department. The program of study for each PhD student registered in the Collaborative Program in Biomedical Engineering must be approved by the collaborating department and the Program Committee; the program will normally comprise at least 2.0 full-course equivalents (FCE) and a thesis.

Each PhD student is normally required to have a supervisory committee consisting of at least three persons, including a supervisor who has an appropriate graduate appointment and who is also a member of the graduate faculty in the home department. When appropriate, an additional member of the supervisory committee may be from outside the University of Toronto, with approval from the School of Graduate Studies.

For doctoral degrees, the examination committee will be constituted according to procedures in the home graduate department and will include a member from that collaborating department.

Courses
Not all courses are offered every year. Students should contact the Institute office for details.

BME 1010H Graduate Seminar
BME 1011H Graduate Seminar
BME 1405H Clinical Engineering Instrumentation I
BME 1430H Mathematical Theory of Tracer Kinetics
BME 1436H Clinical Engineering Instrumentation II
BME 1445H Special Topics in Clinical Engineering
BME 1446H Transduction of Physiological Events
BME 1450H Bioengineering Science
BME 1452H Signal Processing for Bioengineering
BME 1453H Cell and Tissue Engineering
BME 1454H Regenerative Medicine: Fundamentals and Applications
BME 1455H Changing Health Care Technologies, People, and Places
BME 1457H Biomedical Nanotechnology
BME 1458H Pattern Discovery Methods for Biomedical Engineering
BME 1459H Protein Engineering
BME 4444Y+ Practice in Clinical Engineering
CHE 1107H Applied Mathematics
CHE 1138H Mathematical Methods in Chemical Engineering
CHE 1141H Advanced Chemical Reaction Engineering
CHE 1143H Transport Phenomena
CHE 1145H Advanced Chemical Analysis
CHE 1304H Polymer Mechanics and Rheology
CHE 1310H Chemical Properties of Polymers
DEN 1070H Advances in Dental Materials Science
DEN 1081H Bone Interfacing Implants
ECE 1228H Electromagnetic Theory
ECE 1352H Analog Circuit Design I
ECE 1502H Information Theory
ECE 1511H Signal Processing
ECE 1512H Digital Image Processing and Applications
ECE 1514H Spectral Analysis and Array Processing
ECE 1521H Statistical Communication Theory
ECE 1647H Nonlinear Control System Analysis
JCB 1349H Molecular Assemblies: Structure/Function/Properties
JEB 1365H Ultrasound: Theory and Applications in Biology and Medicine
JEB 1375H Practical Optimization
JEB 1433H Medical Imaging
JEB 1444H Neural Engineering
JEB 1447H Sensory Communications
JEB 1451H Neural Bioelectricity
JNP 1017H+ Molecular and Biochemical Basis of Toxicology
JNP 1018H+ Current Topics in Molecular and Biochemical Toxicology
JNR 1444Y Fundamentals of Neuroscience: Cellular and Molecular
JNS 1000Y Fundamentals of Neuroscience: Systems and Behaviour
JNS 1001H Neuroanatomy of Mind
JNS 1010H Analytical Neuroscience
JPB 1022H Human Physiology as Related to Biomedical Engineering
JPB 1055H Bioengineering for Life Scientists
JTC 1135H Applied Surface Chemistry
JTC 1331H Biomaterials Science
MBP 1007H Fundamentals in Molecular and Cell Biology I
MBP 1008H Fundamentals in Molecular and Cell Biology II
MBP 1022H Advanced Cell Biology for Physical Scientists
MIE 1001H Dynamics II
MIE 1062H Robot Kinematics and Dynamics
MIE 1101H Thermodynamics II
MIE 1109H Surface Phenomena
MIE 1201H Fluid Mechanics III

+ Extended course. For academic reasons, course work is extended into session following academic session in which course is offered.
Collaborative Program

MIE 1405H Human Control of Telerobotic Systems
MIE 1729H Machine Perception and Robot Sensors
MIE 1806H Introduction to Digital Image Processing and Analysis
MMS 1026H Analytical Electron Microscopy
PHM 1108H Advanced Pharmacokinetics II
PHM 1109H Recent Developments in Dosage Form Design
PHM 1110H Chemical Basis of Drug Metabolism
PHM 1117H DNA-Drug Interactions
PSL 1432H Theoretical Physiology
PSL 1052H Fundamentals of Ion Channel Function
REH 1100H Theory and Research in Rehabilitation
REH 1540H Rehabilitation Technology

Program Committee
Christopher Yip - BASc, MSc, PhD, PEng, Canada
Research Chair - Biochemistry
Alf Dolan - BSc, MSc - Biomedical Engineering
Milos Popovic - MSc, MASc, PhD - Biomedical Engineering
William Stanford - PhD, BA - Biomedical Engineering

(Associate Director; Coordinator of Graduate Studies, Biomedical Engineering)
D Grant Allen - BASc, MASc, PhD, PEng - Chemical Engineering & Applied Chemistry
Paul Santerre - BSc, MScEng, PhD - Dentistry
Berj Bardakjian - BSc, BEd, MASc, PhD, PEng - Electrical & Computer Engineering
Harry Elsholtz - BSc, MSc, PhD - Laboratory Medicine & Pathobiology
Zhirui Wang - BEng, MSc, PhD - Materials Science & Engineering
Pierre Sullivan - BSME, MSME, PhD, PEng - Mechanical & Industrial Engineering
Mingyao Liu - MSc, MD - Medical Science
K Sandy Pang - BScPhm, PhD - Pharmaceutical Sciences
Theodore Shepherd - BSc, PhD - Physics
John MacDonald - BSc, PhD - Physiology
Biomedical Toxicology

Degree Programs Offered
Ecology and Evolutionary Biology – MSc, PhD
Laboratory Medicine and Pathobiology – MSc, PhD
Medical Science – MSc, PhD
Nutritional Sciences – MSc, PhD
Pharmaceutical Science – MSc, PhD
Pharmacology and Toxicology – MSc, PhD

Overview
The Collaborative Program in Biomedical Toxicology provides graduate students with a unique opportunity to gain breadth and depth of knowledge in biomedical toxicology beyond their thesis research. This program aims to prepare participants for careers related to toxicology. It emphasizes the development of critical thinking and communication skills in addition to acquiring greater knowledge of basic principles and specific aspects of biomedical toxicology.

The graduate programs listed above participate in this collaborative program. Students may pursue an MSc or PhD degree. Graduate units participating in the program contribute graduate courses, provide facilities, and provide supervision for graduate research.

Graduate students from departments other than the participating units listed, who are interested in pursuing a program in toxicology, should speak to the Director of the Collaborative Program in Biomedical Toxicology and the graduate advisor(s) in their home department to discuss the possibility. Detailed program information is available on the Web at http://www.pharmtox.utoronto.ca/programs/cpbt.htm and from the Department of Pharmacology and Toxicology.

 Upon successful completion, the student receives, in addition to the MSc or PhD degree in their departmental area, a notation on the transcript reading “Completed MSc Collaborative Program in Biomedical Toxicology” or “Completed PhD Collaborative Program in Biomedical Toxicology”.

Contact and Address
Web: www.pharmtox.utoronto.ca/programs/cpbt.htm
E-mail: pharmtox.dept@utoronto.ca
Telephone: (416) 978-5244
Fax: (416) 978-6395

Collaborative Program in Biomedical Toxicology
Department of Pharmacology
University of Toronto
Room 4207, Medical Sciences Building
1 King’s College Circle
Toronto, Ontario M5S 1A8
Canada

Degree Programs

Master of Science

Admission Requirements
• Applicants who wish to enrol in the collaborative program must first apply to and be accepted by one of the participating home departments under its regulations. Once students have been admitted to their home department, they should register in the Collaborative Program in Biomedical Toxicology by contacting the Program Director.

Program Requirements
• Complete JNP 1014Y Interdisciplinary Toxicology and JNP 1016H Graduate Seminar in Toxicology.
• Attend a minimum of six academic seminars related to toxicology during the master’s program.
• Complete a research thesis or project as required by the home department. It is understood that the research topic will be in the area of biomedical toxicology.

Doctor of Philosophy

Admission Requirements
• Applicants who wish to enrol in the collaborative program must first apply to and be accepted by one of the participating home departments under its regulations. Once students have been admitted to their home department, they should register in the Collaborative Program in Biomedical Toxicology by contacting the Program Director.

Program Requirements
• Complete JNP 1014Y Interdisciplinary Toxicology; JNP 1016H Graduate Seminar in Toxicology, plus a 0.5 full-course equivalent (FCE) in the area of toxicology (approved by the Director of the collaborative program). The home department and the Director of the Collaborative Program in Biomedical Toxicology will decide whether these courses are in addition to home departmental requirements or substitutions for home departmental requirements.
• Attend a minimum of 12 academic seminars related to toxicology during the doctoral program.
• Complete a research thesis or project as required by the home department. It is understood that the research topic will be in the area of biomedical toxicology.

Courses
JNP 1014Y Interdisciplinary Toxicology
JNP 1016H Graduate Seminar in Toxicology

Biomedical Toxicology 421
Program Committee
Donald Jackson - BSc, MSc, PhD - Ecology & Evolutionary Biology
Harry Elsholtz - BSc, MSc, PhD - Laboratory Medicine & Pathobiology
Mingyao Liu - MD, FRCP(C) - Medical Science
Wendy Ward - BASc, MSc, PhD - Nutritional Sciences
Peter John O’Brien - BSc, MSc, PhD - Pharmaceutical Sciences
Denis Grant - BSc, PhD - Pharmacology & Toxicology
David Riddick - BSc, PhD - Pharmacology & Toxicology
Cindy Woodland - BSc, MSc, PhD - Pharmacology & Toxicology (Director)
Biomolecular Structure

Lead Faculty
Medicine

Degree Programs Offered
Biochemistry – PhD
Chemistry – PhD
Medical Biophysics – PhD
Molecular Genetics – PhD

Overview
The graduate program in Biomolecular Structure is a collaborative program involving the graduate programs listed above. The program is open to PhD students wishing to train under the supervision of one of the participating investigators. The program will appeal to students from a wide variety of backgrounds with an interest in studying the structure and function of biomolecules.

Contact and Address
Web: biochemistry.utoronto.ca/BMS/
E-mail: james.rini@utoronto.ca
Telephone: (416) 978-0557
Fax: (416) 978-6885

J. M. Rini, Coordinator
Collaborative Program in Biomolecular Structure
Department of Molecular Genetics
Room 5360, Medical Sciences Building
University of Toronto
Toronto, Ontario M5S 1A8
Canada

Degree Programs

Doctor of Philosophy

Minimum Admission Requirements
• Applicants who wish to enrol in the collaborative program must apply to and be admitted to both the collaborative program and a graduate degree program in one of the collaborating departments. Applicants must first be admitted to one of the collaborating graduate units before applying to the collaborative program.

Program Requirements
• Complete JBB 2026H Protein Structure, Folding and Design and an additional 0.5 full-course equivalent (FCE) in a specialized topic.
• Participate in the Biomolecular Structure Program seminar series.

Courses
Not all courses will be offered every year. Departments should be consulted each year to confirm course offerings.

JBB 2026H Protein Structure, Folding and Design
JBB 2025H Protein Crystallography

Program Committee
Julie Forman-Kay - BSc, PhD - Biochemistry
G Andrew Woolley - BSc, PhD - Chemistry
David Rose - BA, PhD - Medical Biophysics
Lewis Kay - BSc, PhD, Canada Research Chair - Molecular Genetics
James Rini - BSc, PhD - Molecular Genetics (Coordinator)
Collaborative Program

Book History and Print Culture

Lead Faculty
Arts and Science

Degree Programs Offered
Art – MA, PhD
Comparative Literature – MA, PhD
English – MA, PhD
French Language and Literature – MA, PhD
History – MA, PhD
History and Philosophy of Science and Technology – MA, PhD
Information Studies – MIST, PhD
Italian Studies – MA, PhD
Medieval Studies – MA, PhD
Music – MA, PhD

Overview
Histoire du livre, History of the Book, Textual Studies, Print Culture, Sociology of the Text - all these names have been used to describe a growing international academic movement. The graduate programs listed above, in conjunction with Massey College, sponsor an interdisciplinary program in Book History and Print Culture (BHPC) in which the rich physical and human resources of the University of Toronto are brought to bear on multiple aspects of the creation, transmission, and reception of the written word.

Students register first for a master’s or doctoral degree in their home units and then apply to the collaborative program. If they satisfy the requirements of both programs, they receive their degree with a notation on the transcript “Collaborative Program in Book History and Print Culture”.

Contact and Address
Web: bookhistory.fis.utoronto.ca
E-mail: book.history@utoronto.ca
Telephone: (416) 946-3560
Fax: (416) 978-1759

Collaborative Program in Book History and Print Culture
Massey College
4 Devonshire Place
Toronto, Ontario M5S 2E1
Canada

Degree Programs

Master’s Degrees

Minimum Admission Requirements
• Applicants who wish to enrol in the collaborative program must apply to and be admitted to both the collaborative program and a graduate degree program in one of the collaborating departments (home unit).

Applications to the collaborative program write to the Director giving information about their backgrounds and relevant interests, identifying the degree and home unit for which they are applying, and outlining a proposed program of study preferably by April 1 for September admission. Applicants need not wait for a final decision from the home unit before applying to the collaborative program. (An academic transcript should be included in the application; a photocopy or print-out from a student Web service will do.) Advice is available from the Director and the Program Committee.

Applications from the participating units have priority in admissions. If there is space in the program, students from other units may apply; they should consult the graduate coordinator in their home unit and the Director of the BHPC program. Since course requirements vary from unit to unit, it is essential that there be close consultation between the collaborative program and the home unit at the time of the application.

Program Requirements
• Students must fulfill the degree requirements of the unit in which they are enrolled. Their program of study must also be approved by the BHPC Program Committee. Normally, the BHPC requirements will be met within the program of the home unit.
• At least 2.0 full-course equivalents (FCE) in courses related to book history and print culture, including the seminar BKS 1000Y.
• Depending on the regulations of the home unit, a master’s thesis in the area of book history and print culture may be counted as satisfying the requirement for a second course beyond BKS 1000Y.

Doctor of Philosophy

Minimum Admission Requirements
• Applicants who wish to enrol in the collaborative program must apply to and be admitted to both the collaborative program and a graduate degree program in one of the collaborating departments (home unit). Applicants to the collaborative program write to the Director giving information about their backgrounds and relevant interests, identifying the degree and home unit for which they are applying, and outlining a proposed program of study preferably by April 1 for September admission. Applicants need not wait for a final decision from the home unit before applying to the collaborative program. (An academic transcript

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should be included in the application; a photocopy or print-out from a student Web service will do.) Advice is available from the Director and the Program Committee.

- Applications from the participating units have priority in admissions. If there is space in the program, students from other units may apply; they should consult the graduate coordinator in their home unit and the Director of the BHPC program. Since course requirements vary from unit to unit, it is essential that there be close consultation between the collaborative program and the home unit at the time of the application.
- An interview will normally form part of the admissions procedure for doctoral applicants.

Program Requirements
- All students must fulfill the degree requirements of the unit in which they are enrolled. Their program of study must also be approved by the BHPC Program Committee.
- BKS 2000H and BKS 2001H. If students have not already taken BKS 1000Y at the master's level, they will be required to take it as a prerequisite or corequisite to the foregoing two doctoral courses.
- The dissertation topic will be in the area of book history and print culture, and the advisory committee will include representation from outside the home unit.
- The program may be completed on a flexible-time basis only by FIS students registered for the FIS flexible-time PhD

Courses
BKS 1000Y Book History and Print Culture
BKS 2000H Advanced Seminar in Book History and Print Culture
BKS 2001H Practicum in Book History and Print Culture

For further details and for listings of appropriate courses in various graduate units, see Web site http://bookhistory.fis.utoronto.ca.

Program Committee
Heather Jackson - BA, MA, PhD - English
Anthony Glinoer - MA – PhD - French
Collaborative Program

Cardiovascular Sciences

Lead Faculty
Medicine

Degree Programs Offered
Biomedical Engineering – MASc, PhD
Dentistry – MSc, PhD
Exercise Sciences – MSc, PhD
Health Policy, Management and Evaluation – MSc, PhD
Laboratory Medicine and Pathobiology – MSc, PhD
Medical Biophysics – MSc, PhD
Medical Science – MSc, PhD
Nursing Science – MN, PhD
Pharmacology and Toxicology – MSc, PhD
Pharmaceutical Sciences – MSc, PhD
Physiology – MSc, PhD
Public Health Sciences – MSc, PhD
Rehabilitation Science – MSc, PhD

Overview
The graduate programs listed above, together with the clinical departments of Anesthesia, Medicine, and Surgery, participate in the graduate Cardiovascular Sciences Collaborative Program at the University of Toronto. Units participating in the program contribute graduate courses and provide facilities and supervision for graduate research. Applicants must first be accepted by one of the participating graduate units and then complete a separate application to register in the collaborative program.

Students follow a program of study acceptable to both the participating unit and the Cardiovascular Sciences Program. Upon successful completion of the requirements, students receive, in addition to the master's or doctoral degree in their home graduate unit, a separate certificate from the program, and the notation “Completed Collaborative Program in Cardiovascular Sciences” on their transcript.

Contact and Address
Web: www.cscp.utoronto.ca
E-mail: cv.program@utoronto.ca
Telephone: (416) 978-0746
Fax: (416) 946-5713

Cardiovascular Sciences Collaborative Program
Room 88, FitzGerald Building
150 College Street
University of Toronto
Toronto, Ontario M5S 3E2
Canada

Degree Programs

Master's Degrees

Minimum Admission Requirements
- Normally an A- average in previous course work (publications and research work may be considered for mature students).
- Student has already been accepted into a home graduate unit that participates in the Cardiovascular Sciences Collaborative Program.
- Acceptance by a supervisor who is a faculty member of the Cardiovascular Sciences Collaborative Program.
- Research area falls within mandate of the Cardiovascular Sciences Collaborative Program.

Program Requirements
- Students must meet the requirements of their home graduate unit in terms of course work and thesis work.
- Write a thesis under the supervision of a faculty member of the Collaborative Program. The thesis topic will be in the area of cardiovascular sciences. An unbound copy of the accepted thesis in final form must be submitted to the Cardiovascular Sciences Collaborative Program.
- To qualify for the Cardiovascular Sciences specialization, students obtaining their master’s degree must complete 0.5 full-course equivalent (FCE) in an approved cardiovascular course listed under approved “Courses of Instruction”.
- Attend the annual Student Research Day and demonstrate excellence in cardiovascular related research.

Doctor of Philosophy

Minimum Admission Requirements
- Normally an A- average in previous course work (publications and research work may be considered for mature students).
- Student has already been accepted into a home graduate unit that participates in the Cardiovascular Sciences Collaborative Program.
- Acceptance by a supervisor who is a faculty member of the Cardiovascular Sciences Collaborative Program.
- Research area falls within mandate of the Cardiovascular Sciences Collaborative Program.

Program Requirements
- Students must meet the requirements of their home graduate unit in terms of course work and thesis work.
- Write a thesis under the supervision of a faculty member of the Collaborative Program. The thesis topic will be in the area of cardiovascular sciences.
An unbound copy of the accepted thesis in final form must be submitted to the Cardiovascular Sciences Collaborative Program.

- To qualify for the Cardiovascular Sciences specialization, students obtaining their doctoral degree must have 1.0 full-course equivalent (FCE) (1.0 FCE = two half-courses) chosen from among the following four courses: JCV 3060H, JCV 3061H, JCV 3062H, JCV 3063H.

- All students must attend the annual Student Research Day and demonstrate excellence in cardiovascular related research.

**Courses**

Cardiovascular sciences courses offered by the participating units are listed below. Not all courses are offered each year. For course details, consult the program's Web site, www.cscp.utoronto.ca.

- EXS 5508H Cardiovascular Disease and Exercise
- JCV 1060H Developmental Cardiovascular Physiology
- JCV 3060H Advanced Topics in Cardiovascular Sciences—Molecular Biology and Heart Signal Transduction
- JCV 3061H Advanced Topics in Cardiovascular Sciences—Hormones
- JCV 3062H Advanced Topics in Cardiovascular Sciences—Heart Function
- JCV 3063H Advanced Topics in Cardiovascular Sciences—Vascular
- JEB 1365H Ultrasound: Theory and Applications in Biology and Medicine
- JTC 1331H Biomaterials Science
- LMP 1015H Vascular Pathobiology
- LMP 1504H Cell and Molecular Biology of Cardiovascular Diseases
- PSL 1462H Molecular Aspects of Cardiac Function

**Program Committee**

Howard Tenenbaum - DDS, DipPerio, PhD, FRCD(C) - Dentistry
Scott Thomas - BSc, MSc, PhD - Exercise Sciences
Margaret Rand - BSc, PhD - Laboratory Medicine & Pathobiology
Graham Wright - BASc, MASc, PhD - Medical Biophysics
Vivek Rao - BSc, PhD, MD, FRCSC - Medical Science
Carin Wittnich - MSc, DVM - Medical Science, Physiology (Director)
Judith Watt-Watson - BScN, MScN, PhD - Nursing Science
Xiao Yu Wu - BSc, MScEng, PhD - Pharmaceutical Sciences
John Parker - MD - Pharmacology
Scott Heximer, PhD - Canada Research Chair

- Physiology
Dina Brooks, BSc(PT) - MSc, PhD - Rehabilitation Science
Student Representatives
Collaborative Program

Community Development

Lead Faculty
School of Graduate Studies

Degree Programs Offered
Adult Education and Community Development – MA, MEd
Counselling Psychology – MA, MEd
Geography (Community Planning) – MScPl
Public Health Sciences (Community Health) – MHSc
Social Work – MSW
Nursing – MN (pending approval)

Overview
The Collaborative Program provides students with a multidisciplinary graduate education in community development. Community development involves working with community members and groups to effect positive change in the social, economic, organizational, or physical structures of a community that improve both the welfare of community members and the community’s ability to direct its future.

Students must apply to and register in a home participating unit (i.e., one of the graduate departments or faculties listed above), and follow a course of study acceptable to both that unit and the Collaborative Program in Community Development. Applications are considered for the master’s degree programs listed above.

Degree Programs

Master’s Degrees

Minimum Admission Requirements
• Collaborative programs are administered under the auspices of the School of Graduate Studies.
• Applicants must be accepted for admission to a participating graduate unit and comply with the admission procedures of that unit before applying to the Collaborative Program in Community Development.
• Applicants must submit the following to the Program Committee of the Collaborative Program in Community Development:
  o a copy of the letter accepting you into one of the participating graduate units;
  o a resume or curriculum vitae;
  o a letter explaining how your program of study, your specific interests, and your career goals relate to community development (i.e. why you want to enrol in the Collaborative Program in Community Development). Maximum length: 500 words. Include reference to any relevant experience (volunteer, work, education, etc.).

Program Requirements
• Students must register in the master’s degree program through one of the participating home graduate units. They must meet all respective degree requirements of the School of Graduate Studies and their participating home graduate unit.
• To fulfill the requirements of the Collaborative Program in Community Development, they must complete the following. Normally, the required courses listed below are taken as options within regular departmental or faculty degree requirements, not as additional courses.
  o core course UCS 1000H Community Development: Theory and Practice
  o an additional 1.0 full-course equivalent (FCE) in the subject area of the Collaborative Program, to be approved by the Collaborative Program director, of which at least 0.5 FCE must be external to the home graduate unit
  o participation in a non-credit coordinating seminar on community development
  o where required by the home degree program, either a thesis or the major research paper, as designated by the home degree program, must be on a topic related to community development. A member of the thesis committee or the reader of a major research paper must be a member of the faculty associated with the Collaborative Program.

Contact and Address
Web: www.urbancentre.utoronto.ca/communitydevelopment.html
E-mail: urbancentre@utoronto.ca
Telephone: (416) 416-978-2072
Fax: (416) 416-978-7162

Sarah Wakefield,
Collaborative Program in Community Development
Centre for Urban and Community Studies
University of Toronto
Suite 400, 455 Spadina Avenue
Toronto, Ontario M5S 2G8
Canada

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Collaborative Program

Courses

Core Course
UCS 1000H Community Development: Theory and Practice

Students must take 1.0 FCE in the subject area of the Collaborative Program, to be approved by the Collaborative Program director. The following is a list of the currently approved courses; list is reviewed annually and posted on the program Web site.

Adult Education
AEC 1102H Community Development: Innovative Models
AEC 1104H Community Education and Organizing
AEC 1131H Special Topics in Adult Education
AEC 3119H Global Perspectives on Feminist Education, Community Development and Community Transformation
AEC 3131H Special Topics in Adult Education
AEC 3182H Citizenship Learning and Participatory Democracy

Counselling Psychology
AEC 1275H Special Topics in Counselling Psychology
AEC 1289H Community Mental Health
AEC 1409H Creative Empowerment Work with the Disenfranchised: Healing and Collective Action
AEC 3211H Counselling and Researching in Context: Critical Perspectives on Counselling and Health Promotion Research

Planning
JPG 1421H Health in Urban Environments
PLA 1503H Planning and Social Policy
JPG 1507H Housing and Housing Policy
JPG 1508H Planning with the Urban Poor in Developing Countries
JPG 1512H Place, Politics and the Urban
JPG 1615H Planning the Social Economy

Public Health Sciences
CHL 5801H Health Promotion
CHL 7001H Directed Reading in an Approved Field of Community Health

Social Work
SWK 4210H Promoting Empowerment
SWK 4306H Process of Social Exclusion, Marginalization, and Resistance
SWK 4422H Social Housing and Homelessness
SWK 4568H Social Work with Immigrants and Refugees

Program Committee
Jack Quarter - BA, MA, PhD - Adult Education & Counselling Psychology
Daniel Schugurensky - BEd, MEd, PhD - Adult Education & Counselling Psychology
Suzanne Stewart - BA, MA, PhD - Adult Education & Counselling Psychology
Sarah Wakefield - BA, MA, PhD - Geography (Director)
Blake Poland - BA, MA, PhD - Public Health Sciences
J David Hulchanski - BA, MSc(Pl), PhD, MCIP, Chow Yei Ching Social Work Chair in Housing - Social Work
Comparative, International and Development Education

Degree Programs Offered

Adult Education – MA, MEd, EdD, PhD
Curriculum - MA, MEd, EdD, PhD
Educational Administration – MA, MEd, EdD, PhD
Higher Education – MA, MEd, EdD, PhD
History and Philosophy of Education – MA, MEd, EdD, PhD
Second Language Education – MA, MEd, EdD, PhD
Sociology in Education – MA, MEd, EdD, PhD

Overview

Comparative, International and Development Education (CIDE) is one of the world's largest, most diverse and dynamic graduate programs in the field of comparative education. Research interests span an exciting range of theoretical and practical issues, from the study of ethnicity and identity to the issues of globalization and global governance, from non-formal learning and citizenship education to concrete problems of educational reform, social equality, language education, conflict resolution and community development. We approach these issues from a range of theoretical and disciplinary frames: more traditional, sociological, historical, and philosophical approaches are taught alongside vibrant interpretations of feminist, critical, post-structuralist and cultural theories.

The CIDE program will interest Canadian students who wish to work and live in other cultures. It will also interest international students who wish to relate their studies at OISE/UT directly to their own societies and learning systems.

Students can take courses in such fields as political science, feminist studies, sociology, and geography. The CIDE program is linked with events and programs at the Munk Centre for International Studies at the University of Toronto.

Successful students receive a notation on their transcript identifying their specialization in Comparative, International and Development Education.

Contact and Address

Web: cide.oise.utoronto.ca
E-mail: cide@oise.utoronto.ca
Telephone: (416) 978-0892
Fax: (416) 926-4749

Comparative, International and Development Education Centre (CIDEC)
Ontario Institute for Studies in Education
University of Toronto
7th floor, 252 Bloor Street West
Toronto, Ontario M5S 1V6
Canada

Master’s Degrees

Minimum Admission Requirements

• Applicants who wish to enrol in the Collaborative Program must apply to and be admitted to both the Collaborative Program and a graduate degree program in one of the collaborating departments. Applicants should apply to the appropriate degree program in one (or more) of the collaborating departments that corresponds most closely to their general background and interests.

• Applicants to the CIDE Collaborative Program are normally expected to have had at least one year of international or cross-cultural experience.

• Prospective applicants should review the detailed information about the CIDE program available on the CIDE Web page at http://cide.oise.utoronto.ca. They are strongly advised to contact one of the core CIDE faculty members in their home department to discuss their research interests and goals.

Program Requirements

• Individual student programs of study must meet the requirements of both the home department and the Collaborative Program. Normally, a careful selection of courses will satisfy this requirement without any additional course load.

• Courses as follows:
  o 0.5 full-course equivalent (FCE) required introduction: CIE 1001H Introduction to Comparative, International and Development Education
  o 0.5 core FCE CIDE master’s level course
  o 1.0 FCE (equivalent to two half-courses) other core CIDE or specialization master’s-level courses

• Regular participation in and attendance at the CIDE Seminar Series.

• Preparation of a thesis, master’s research paper, or comprehensive paper (depending upon the requirements of the home department) which relates to and demonstrates master’s level understanding of the research/theory base of CIDE as certified by a participating faculty member in the home department.

Doctor of Philosophy

Admission Requirements

• Applicants who wish to enrol in the Collaborative Program must apply to and be admitted to both the Collaborative Program and a graduate degree program in one of the collaborating departments. Applicants should apply to the appropriate degree program in one (or more) of the collaborating departments that corresponds most closely to their general background and interests.
Applicants to the CIDE Collaborative Program are normally expected to have had at least one year of international or cross-cultural experience. Prospective applicants should review the detailed information about the CIDE program available on the CIDE Web page at http://cide.oise.utoronto.ca. They are strongly advised to contact one of the core CIDE faculty members in their home department to discuss their research interests and goals.

Program Requirements

Individual student programs of study must meet the requirements of both the home department and the Collaborative Program. Normally, a careful selection of courses will satisfy this requirement without any additional course load.

Courses as follows:
- 0.5 full-course equivalent (FCE) required introduction: CIE 1001H Introduction to Comparative, International and Development Education, if not already taken, or equivalent if transferring from another university.
- 0.5 FCE core CIDE doctoral level course
- 1.0 FCE (equivalent to two half-courses) other core CIDE or specialization doctoral-level courses
- Regular participation in and contribution to the CIDE Seminar Series (at least one major presentation to the seminar group related to the student’s thesis research/development work in addition to regular participation). Minimum attendance at 5 seminars required.
- Development of a doctoral thesis that contributes to the research/theory base of CIDE as certified by a participating faculty member, who is also a member of the thesis committee, from the home department.

Course Offerings

Not all courses are offered each year. Refer to cide.oise.utoronto.ca for current course offerings.

Comparative Education

CIE 1001H Introduction to Comparative, International and Development Education
CIE 1002H Practicum for Comparative, International and Development Education

Adult Education and Counselling Psychology

AEC 1102H Community Development: Innovation Models
AEC 1114H Comparative and International Perspectives in Adult Education
AEC 1145H Participatory Research in the Community and the Workplace
AEC 1146H Women, War and Learning
AEC 1180H Aboriginal World Views: Implications for Education
AEC 1181H Embodied Learning and Qi Gong
AEC 3103H Teaching about Global and Social Issues
AEC 3104H Political Economy of Adult Education in Global Perspectives
AEC 3119H Global Perspectives on Feminist Education, Community Development, and Community Transformation
AEC 3126H Transformative Education and the Global Community: Creativity and Social Change
AEC 3131H Special Topics in Adult Education: Comparative and International Perspectives
AEC 3132H Special Topics in Women in Development and Community Transformation
AEC 3138H Social Theories and Adult Education
AEC 3140H Post-Colonial Relations and Transformative Education
AEC 3179H Work, Technology and the Knowledge Economy
AEC 3180H Global Governance and Educational Change: the Politics of International Cooperation in Education

Curriculum, Teaching and Learning

CTL 1061H Comparative Education: The Development of Third World Educational Systems
CTL 1033H Multicultural Perspectives in Teacher Development: Reflective Practicum
CTL 1037H Comparative and Cross-Cultural Perspectives
CTL 1060H Education and Social Development
CTL 1312H Democratic Citizenship Education
CTL 1318H Teaching Conflict and Conflict Resolution
CTL 1863H Controversial Issues in Development Education
CTL 1864H Methodologies for Comparing Educational Systems
CTL 3008H Critical Pedagogy, Language, and Cultural Diversity
CTL 3015H Seminar in Second-Language Literacy Education
CTL 3018H Language Planning and Policy (Politique et aménagement linguistique)
CTL 3024H Second Language Teacher Education

Sociology and Equity Studies in Education

SES 1912H Foucault and Research in Education and Culture: Discourse, Power and the Subject
SES 1922H Sociology of Race and Ethnicity
SES 1924H Modernization, Development, and Education in African Contexts
SES 1927H Global Economic Restructuring—International Migration—Immigration Policies (Canada, U.S., Germany)
SES 1925H Indigenous Knowledge and Decolonization: Pedagogical Implications
SES 1956H Social Relations of Cultural Production in Education
SES 2999H Special Topics in Sociological Research in Education (as designated by CIDE)
### Collaborative Program

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>SES 3910H</td>
<td>Advanced Seminar on Race and Anti-Racism Research Methodology in Education</td>
</tr>
<tr>
<td>SES 3911H</td>
<td>Cultural Knowledges, Representation and Colonial Education</td>
</tr>
<tr>
<td>SES 3914H</td>
<td>Anti-Colonial Thought and Pedagogical Challenges</td>
</tr>
<tr>
<td>SES 3921H</td>
<td>Language and Social Difference in Education: Comparative Perspectives</td>
</tr>
<tr>
<td>SES 3933H</td>
<td>Theorizing Transnationality: Feminist Perspectives</td>
</tr>
<tr>
<td>SES 3942H</td>
<td>Innovations in Education: A Comparative Analysis</td>
</tr>
<tr>
<td>SES 3943H</td>
<td>Sociology of State Formation and Genealogies of Government</td>
</tr>
<tr>
<td>SES 3952H</td>
<td>Sexism, Racism, Colonialism: Pedagogical Implications</td>
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<tr>
<td>TPS 1016H</td>
<td>School Program Development and Implementation</td>
</tr>
<tr>
<td>TPS 1019H</td>
<td>Diversity and the Ethics of Educational Administration</td>
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<tr>
<td>TPS 1020H</td>
<td>Teachers and Educational Change</td>
</tr>
<tr>
<td>TPS 1027H</td>
<td>The Search for Educational Quality and Excellence in a Global Economy</td>
</tr>
<tr>
<td>TPS 1029H</td>
<td>Special Applications of the Administrative Process: Improving Student Outcomes on a System Wide Scale</td>
</tr>
<tr>
<td>TPS 1047H</td>
<td>Managing Changes in Classroom Practice</td>
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<tr>
<td>TPS 1400H</td>
<td>The Origins of Modern Schooling I: Problems in Education Before the Industrial Revolution</td>
</tr>
<tr>
<td>TPS 1415H</td>
<td>The History of the Teaching Profession</td>
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<tr>
<td>TPS 1420H</td>
<td>European Popular Culture and the Social History of Education I</td>
</tr>
<tr>
<td>TPS 1421H</td>
<td>The History of Women and Education</td>
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<tr>
<td>TPS 1422H</td>
<td>Education and Family Life in the Modern World I</td>
</tr>
<tr>
<td>TPS 1425H</td>
<td>Class Formation and Its Relation to the Schools</td>
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<tr>
<td>TPS 1430H</td>
<td>Gendered Colonialisms, Imperialisms and Nationalisms in History</td>
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<tr>
<td>TPS 1447H</td>
<td>Technology in Education: Philosophical Issues</td>
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<tr>
<td>TPS 1448H</td>
<td>Popular Culture and the Social History of Education II</td>
</tr>
<tr>
<td>TPS 1803Y</td>
<td>Recurring Issues in Postsecondary Education</td>
</tr>
<tr>
<td>TPS 1806H</td>
<td>Systems of Higher Education</td>
</tr>
<tr>
<td>TPS1807H</td>
<td>Strategic and Long-range Planning for Postsecondary Systems</td>
</tr>
<tr>
<td>TPS 1825H</td>
<td>Comparative Education: Theory and Methodology</td>
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<tr>
<td>TPS 1826H</td>
<td>Comparative Higher Education</td>
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<td>TPS 1832H</td>
<td>East Asian Higher Education</td>
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<tr>
<td>TPS 2006H</td>
<td>Educational Finance and Economics</td>
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<td>(Students who have taken TPS 1017H, TPS 1841H are not eligible to take TPS 2006H)</td>
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### Theory and Policy Studies in Education

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<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>TPS 3020H</td>
<td>Educational Change in the Post-Modern Age</td>
</tr>
<tr>
<td>TPS 3029H</td>
<td>Special Topics in Educational Administration: Advanced Topics for Educational Administration</td>
</tr>
<tr>
<td>TPS 3041H</td>
<td>Administrative Theory and Educational Problems II: Doctoral Seminar on Policy Issues in Education</td>
</tr>
<tr>
<td>TPS 3045H</td>
<td>Educational Policy and Program Evaluation</td>
</tr>
<tr>
<td>TPS 3423H</td>
<td>Education and Family Life in the Modern World II</td>
</tr>
<tr>
<td>TPS 3447H</td>
<td>Theories of Modernity and Education I</td>
</tr>
<tr>
<td>TPS 3806H</td>
<td>Case Studies in Comparative Higher Education</td>
</tr>
<tr>
<td>TPS 3810H</td>
<td>International Academic Relations</td>
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### Geography

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<th>Course Code</th>
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<tr>
<td>JPG 1509H</td>
<td>Feminism, Postcoloniality and Development</td>
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### Political Science

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>JPE 2408Y</td>
<td>Political Economy of International Development</td>
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</tbody>
</table>

### Program Committee

Shahrzad Mobaj - MEd, PhD - Adult Education & Counselling Psychology
Karen Mundy - BA, MA, PhD, Canada Research Chair - Adult Education & Counselling Psychology **(Director)**
Daniel Schugurensky - BEd, MEd, PhD - Adult Education & Counselling Psychology
Alister Cumming - BA, MA, PhD - Curriculum, Teaching & Learning
Kathy Bickmore - BA, MA, PhD - Curriculum, Teaching & Learning
Mark Evans, PhD - Curriculum, Teaching & Learning, Associate Dean, Teacher Education
Joseph Farrell - BSc, PhD - Curriculum, Teaching & Learning
Grace Feuerverger - BA, MA, PhD - Curriculum, Teaching & Learning
Vandra Lea Masemann, PhD - Curriculum, Teaching & Learning
Sarfaraz. Niyozov - BA, MA, PhD - Curriculum, Teaching & Learning
George J. S.Dei - BA, MA, PhD - Sociology & Equity Studies in Education
Paul Olson, BA, MA - Sociology & Equity Studies in Education
Stephen Anderson, PhD - Theory & Policy Studies in Education
Ruth Hayhoe - BA, MA, PhD - Theory & Policy Studies in Education
Reva Joshee - BA, MA, PhD - Theory & Policy Studies in Education
Developmental Biology

Degree Programs

Doctor of Philosophy

Minimum Admission Requirements

• Students who wish to enrol in the Collaborative Program must apply to and be admitted to both the Collaborative Program and a graduate degree program in one of the collaborating departments. Students must be registered in the doctoral program of one of the host departments and must be undertaking research in developmental biology under the supervision of a member of the program.
• Prospective students should contact the coordinator for additional details on admission procedures and course requirements.

Program Requirements

• Complete any core courses required by the host department. In addition, they must complete the interdepartmental course JDB 1025H and the seminar course JDB 1026Y. These courses may be taken in place of some host department courses.
• Students are required to present on two separate occasions at the Annual Developmental Biology Retreat in the form of one oral presentation and one poster presentation.
• Complete a PhD thesis.

Courses

The following courses are offered by the program every year.

JDB 1025H Developmental Biology
JDB 1026Y Student Seminars in Developmental Biology

Program Committee

Ulrich Tepass - PhD, CIHR Investigator - Cell & Systems Biology
Juan Carlos Zuniga-Pflucker - PhD, Canada Research Chair in Developmental Immunology - Immunology
Julie Brill, PhD - Molecular Genetics
Mei Zhen - PhD, Canada Research Chair in Brain and Behaviour - Molecular Genetics
N. Forgione - Cell & Systems Biology (Student Representative)

*Courses which may continue over a program. The course is graded when completed.

Contact and Address

Web: www.utoronto.ca/devbiol/
E-mail: dev.bio@utoronto.ca
Telephone: (416) 586-8267
Fax: (416) 586-8857

Dr. Helen McNeill
Collaborative Program in Developmental Biology
Department of Molecular Genetics
University of Toronto
600 University Avenue, Room 884
Toronto, Ontario M5G 1X5
Canada

Overview

The graduate programs listed above participate in the Collaborative Program in Developmental Biology. The objectives of the program are to:
1. promote and foster excellence in developmental biology research in Toronto.
2. provide a means for graduate students working on developmental biology projects to be exposed to a broad range of issues and approaches in modern developmental biology.
3. provide a single comprehensive advanced PhD-level graduate course to complement a number of introductory courses provided by different departments.
4. provide a forum for interaction between investigators in Developmental Biology in different departments via participation in student seminars, supervisory committees, journal clubs, retreats and seminars/symposia.

This is a PhD program only.

Upon successful completion of the PhD requirements of the host department and the program, students receive the notation “Completed Program in Developmental Biology” on their transcript.

Degree Programs Offered

Biochemistry – PhD
Cell and Systems Biology – PhD
Immunology – PhD
Laboratory Medicine and Pathobiology – PhD
Medical Biophysics – PhD
Molecular Genetics – PhD
Physiology – PhD

Minimum Admission Requirements

• Students who wish to enrol in the Collaborative Program must apply to and be admitted to both the Collaborative Program and a graduate degree program in one of the collaborating departments. Students must be registered in the doctoral program of one of the host departments and must be undertaking research in developmental biology under the supervision of a member of the program.
• Prospective students should contact the coordinator for additional details on admission procedures and course requirements.

Program Requirements

• Complete any core courses required by the host department. In addition, they must complete the interdepartmental course JDB 1025H and the seminar course JDB 1026Y. These courses may be taken in place of some host department courses.
• Students are required to present on two separate occasions at the Annual Developmental Biology Retreat in the form of one oral presentation and one poster presentation.
• Complete a PhD thesis.

Courses

The following courses are offered by the program every year.

JDB 1025H Developmental Biology
JDB 1026Y Student Seminars in Developmental Biology

Program Committee

Ulrich Tepass - PhD, CIHR Investigator - Cell & Systems Biology
Juan Carlos Zuniga-Pflucker - PhD, Canada Research Chair in Developmental Immunology - Immunology
Julie Brill, PhD - Molecular Genetics
Mei Zhen - PhD, Canada Research Chair in Brain and Behaviour - Molecular Genetics
N. Forgione - Cell & Systems Biology (Student Representative)

*Courses which may continue over a program. The course is graded when completed.
Collaborative Programs

Developmental Science

Lead Faculty
Ontario Institute for Studies in Education

Degree Programs Offered
Human Development and Applied Psychology
- Developmental Psychology and Education Program – MA, PhD
- Psychology – MA, PhD

Overview
The University of Toronto has a very strong group of developmental researchers located in two separate departments: the Department of Psychology and the Department of Human Development and Applied Psychology at the Ontario Institute for Studies in Education. The Collaborative Program in Developmental Science brings these researchers and their students together to provide a comprehensive training program that covers the breadth of developmental science, moving the study of human development beyond its conventional disciplinary boundaries. Developmental and educational psychology, cognitive science, neuroscience, and treatment and prevention sciences are presented as a multidisciplinary foundation for understanding human development and disseminating the benefits of that understanding.

The Collaborative Program prepares students for research careers in basic and applied developmental science. Research into basic processes examines the psychological, computational, and biological mechanisms of cognitive and emotional development, social development, personality development, and developmental psychopathology. More applied research investigates the psychological and biological effects of prevention and intervention techniques in educational, community, and clinical practices. The program also serves to familiarize faculty and students in the program with each other’s research across a broad span of topics and approaches, broadening the perspective and relevance of their work and leading to new collaborative research proposals.

Contact and Address
Web:
1 www.psych.utoronto.ca/~devsci/
2 hdap.oise.utoronto.ca/pages/admissions.html
E-mail:
1 grad@psych.utoronto.ca
2 gradstudy@oise.utoronto.ca
Telephone: (416) 923-6641 ext. 2422
Fax: (416) 926-4713

Degree Programs

Master’s Degrees

Minimum Admission Requirements
- Applicants who wish to enrol in the Collaborative Program must apply to and be admitted to both the Collaborative Program and a graduate degree program in one of the collaborating departments.
- MA students must be accepted under the SGS general regulations by one of the participating departments and according to the specific criteria of the department. In addition, students must apply and be admitted to the Developmental Science Collaborative Program.
- Normally, a psychology background and a demonstrated interest in developmental psychology will be sufficient grounds for admission.
- Students who wish to be admitted to the program must apply to work with faculty members in the program who will act as their research supervisors and advisors.

Program Requirements
- Students must register in the home department and select a course of study that satisfies the requirements of their departmental program as well as the requirements of the Collaborative Program. The student’s advisor will provide counselling and supervision appropriate to both sets of requirements.
- Master’s students follow the requirements of the department in which they are registered, but must include:
  - 1.0 core full-course equivalent (FCE): JDS 1233H Cognitive Development and Applications and JDS 1249H Social-Emotional Development and Applications
  - attendance at a monthly colloquium series

Doctor of Philosophy

Minimum Admission Requirements
- Applicants who wish to enrol in the Collaborative Program must apply to and be admitted to both the Collaborative Program and a graduate degree program in one of the collaborating departments.
- PhD students must be accepted under the SGS general regulations by one of the participating departments and according to the specific criteria of the department. In addition, students must apply and be admitted to the Developmental Science Collaborative Program.
- Normally, a psychology background and a demonstrated interest in developmental psychology will be sufficient grounds for admission.
- Students who wish to be admitted to the program must apply to work with faculty members in the program who will act as their research supervisors and advisors.
Program Requirements

- Students must register in the home department and select a course of study that satisfies the requirements of their departmental program as well as the requirements of the Collaborative Program. The student’s advisor will provide counselling and supervision appropriate to both sets of requirements.
- Doctoral students follow the requirements of the department in which they are registered, but must include:
  - Core course JDS 3000H Advanced Methods in Developmental Science - two term papers required for this course should focus on research directions relevant to their dissertation topics
  - JDS 1233H Cognitive Development and Applications and JDS 1249H Social-Emotional Development and Applications (unless already completed at the master’s level)
  - attendance at a monthly colloquium series

Program Committee

Jennifer Jenkins - BA, MA, PhD, CPsyCh - Human Development and Applied Psychology
Marc Lewis - BA, MA, PhD, CPsyCh - Human Development and Applied Psychology (Director)
Romin Tafarodi, BA, PhD - Psychology
Collaborative Programs

Dynamics of Global Change

Lead Faculty
Arts and Science

Degree Programs Offered
Adult Education and Community Development – PhD
Anthropology – PhD
Economics – PhD
Educational Administration – PhD
Geography – PhD
Health Services Research – PhD
Law – SJD
Management – PhD
Political Science – PhD

Overview
The Collaborative Program in the Dynamics of Global Change is a multidisciplinary program that explores the frontiers of global change across a wide range of issues and identifies the underlying dynamics of change. In a rapidly evolving, complex, and loosely structured global system that engages new actors, change occurs at multiple levels and can have amplifying effects in unexpected ways. This program explores these complex interconnections across disciplinary fields and issue areas. From their home departments, students may take up questions from their own disciplines but explore them through the theoretical and methodological lens of global change.

Contact and Address
Web: www.utoronto.ca/mcis/dgc
E-mail: munk.centre@utoronto.ca
Telephone: (416) 946-8900 (for general inquiries)
Munk Centre for International Studies
1 Devonshire Place
University of Toronto
Toronto, Ontario  M5S 3K7
Canada

Degree Programs

Doctoral Degrees

Admission Requirements
- Each graduate student in the Program shall be enrolled in a participating degree program in the graduate unit where the research is conducted, which is known as the home graduate unit. The student shall meet the admission requirements of both the home graduate unit and the Collaborative Program.

Program Requirements
- Students must meet all respective degree requirements of the School of Graduate Studies, the participating graduate unit, and the Collaborative Program.

• Collaborative program course requirements:
  o 0.5 full-course equivalent (FCE) core course in the Dynamics of Global Change
  o 0.5 FCE comprising two intensive, modular courses in the Dynamics of Global Change
• Students will pursue a dissertation topic related to the dynamics of global change. Normally, the dissertation supervisor will be a core faculty member of the Program. At least one member of the dissertation committee should be drawn from a graduate unit different from and cognate to the student’s home unit.
• Each student’s course of study and overall progress will be reviewed annually by the Collaborative Program director, though ultimate responsibility for the student’s progress will remain with the graduate chair of the home program.

Courses
DGC 1000H Core Issues in the Dynamics of Global Change
DGC 2000H Special Topics in the Dynamics of Global Change
DGC 2001H Special Topics in the Dynamics of Global Change
DGC 2002H Special Topics in the Dynamics of Global Change
DGC 2003H Special Topics in the Dynamics of Global Change

Program Committee
Karen Mundy - BA, MA, PhD, Canada Research Chair - Adult Education & Counselling Psychology
Janice Boddy - BA, MA, PhD, FRSC - Anthropology
Arthur Hosios - BEng, MA, MEng, PhD - Economics
Amrita Daniere - AB, MPP, PhD, MCIP - Geography
Louise Lemieux-Charles - BScN, MScN, PhD - Health Policy, Management & Evaluation
David Dyzenhaus - BA, LLB, DPhil, FRSC - Law
Peter Pauly - MA, PhD - Management
David Cameron - MSc, BA, PhD - Political Science
Reva Joshee - BA, MA, PhD - Theory & Policy Studies in Education

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Editing Medieval Texts

Lead Faculty
Arts and Science

Degree Programs Offered
Classics – PhD
English – PhD
French Language and Literature – PhD
History – PhD
Italian Studies – PhD
Medieval Studies – PhD
Music – PhD
Philosophy – PhD
Religion – PhD
Spanish – PhD

Overview
The Collaborative Program in Editing Medieval Texts offers intensive training in the editing of Latin and vernacular manuscripts, including music. Training in all areas is based on a sound knowledge of Latin and on the principles of editing Latin manuscripts. Students in the Program complete a series of courses which deal with the techniques of reading, transcribing, and editing manuscripts, and then complete an editorial project, which can be a paper for a course in any of the collaborating departments, an independent publishable project, or the student’s dissertation.

Contact and Address
Web: www.chass.utoronto.ca/medieval/
E-mail: medieval.studies@utoronto.ca
Telephone: (416) 978-4884
Fax: (416) 978-8294

Collaborative Program in Editing Medieval Texts
Centre for Medieval Studies
125 Queen’s Park, 3rd Floor
Toronto, Ontario M5S 2C7
Canada

Degree Programs
Doctor of Philosophy

Admission Requirements
• Applicants who wish to enrol in the Collaborative Program must apply to and be admitted to both the Collaborative Program and a graduate degree program in one of the collaborating departments. The Collaborative Program is only available to students in the doctoral stream.
• Students may apply for admission to the Collaborative Program as soon as they have passed the Centre for Medieval Studies’ Level One Latin examination. Students should take the Level One Latin examination no later than the September sitting of their first year (the examination may also be taken the previous April) in order to determine whether they will need to take MST 1000Y during the first year.
• Students must already be admitted to the doctoral stream of one of the collaborating graduate units listed above.

Program Requirements
• MST 1104H and MST 1105H.
• 1.0 full-course equivalent (FCE) chosen from MST 1107H, MST 1110H, MST 1101H.
• Any other approved 0.5 FCE in editing (including departmental courses) as listed below.
• Participation in the required seminar in editorial practices and resources: MST 1111H Sources and Materials for Editing Medieval Texts.
• An approved text edition undertaken as the dissertation, as a project for a course, or independently for a publishable article.

Courses
English
ENG 1093H The Medieval Vernacular Book

Italian Studies
ITA 1165H Introduction to Italian Philology
ITA 1170H Textual Criticism and the Editing of Early Italian Texts

Medieval Studies
MST 1000Y Introductory Medieval Latin
MST 1101H Codicology
MST 1104H Latin Palaeography I (PR)
MST 1105H Latin Palaeography II (PR)
MST 1107H Latin Textual Criticism (PR)
MST 1110H Diplomatics and Diplomatic Editing (PR)
MST 1111H Sources and Materials for Editing Medieval Texts (PR)
MST 1113H Vernacular Text-Editing: A Collaborative Project
MST 1115H English Palaeography (PR)
MST 1384H The Exeter Book of Old English Verse (PR)
MST 1385H Theory and Practice in Editing of Old English Texts I (PR)
MST 1392H Editing and Appreciating Wulfstan’s Prose (PR)
MST 3230H The Common Law of Medieval Europe

Music
MUS 1063H Musical Notation of the Middle Ages
Collaborative Programs

Program Committee
John Magee - BA, MA, PhD - Classics
William Robins - BA, MPhil, PhD - English (Director)
Mark Meyerson - BA, MA, PhD - History
Michael Lettieri - BA, MA, PhD - Italian Studies
David Robert Townsend - BA, MA, PhD - Medieval Studies
Andrew Orchard - BA, MA, PhD - Medieval Studies
William Bowen - BA, BMus, MA, PhD - Music
Peter King - AB, PhD - Philosophy
Joseph Goering - BA, MAR, MA, MSL, PhD - Religion
Josiah Blackmore - BA, MA, PhD - Spanish

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Environment and Health

Degree Programs

Overview

The graduate degree programs listed above participate in the Environment and Health (EH) Collaborative Program. The EH program complements the collaborative program in Environmental Studies (ES) while adding a distinct focus to the interplay between the outdoor environment and health status. The health implications of human impacts on the environment cover a very broad range of issues including air and water quality, contaminated land, and shifts in the distribution of vector-borne diseases (related to changes in land-use, climate, and human migration). The EH program provides students in the health sciences with a broad environmental perspective while at the same time exposes environmental studies students to the health implications of environmental quality. This program may also be of interest to students who are concerned with sociological and policy approaches to the field of environment and health.

Graduate students from home departments other than those listed on the Web site can also apply for an EH Collaborative Program degree once they have received notice of acceptance from the University of Toronto. Interested students should discuss this possibility with the Graduate Student Advisor (416-978-3475 or pavel.pripa@utoronto.ca).

Program Requirements

Students must complete requirements in addition to the degree requirements of their home departments. Typically, students complete up to 1.0 full-course equivalent (FCE) and conduct research on an environmental topic. Specific degree requirements are listed on the Centre's Web site under the Environment and Health Collaborative Program.

Students who successfully complete the EH Collaborative Program receive a special notation on their transcript.

Contact and Address

Web: www.environment.utoronto.ca/Graduate/Programs/EnvironmentHealthCollaborativeProgram.asp
E-mail: centre.environment@utoronto.ca
Telephone: (416) 978-3475
Fax: (416) 978-3884

Centre for Environment
Earth Sciences Centre
Room 1016V, 33 Willcocks Street
University of Toronto
Toronto, Ontario M5S 3E8
Canada

Collaborative Programs
Collaborative Programs

Courses

The Centre for Environment offers individual credit courses that are open to graduate students from all parts of the university, subject to enrolment limits. With the exception of the core course, not all courses are offered every year. Graduate students enrolled in the Environment and Health Collaborative Program are also allowed to take elective courses listed under Environmental Studies Collaborative Program toward completing their Environment and Health Collaborative Program requirements (these are listed under Environmental Studies Collaborative Program in this Calendar).

Core Course
ENV 4001H Graduate Seminar in Environment and Health

Elective Courses
CHL 5416H Environmental Epidemiology
CHL 5903H Environmental Health
CHL 5916H Environmental Health Policy
ENV 1410H Analytical Environmental Chemistry
ENV 1703H Water Resources Management
ENV 1704H Environmental Risk Analysis and Management
ENV 3000H Special Topics—Environmental and Health
ENV 4002H Environment and Health of Vulnerable Populations
GGR 1504H Health, Place and Difference
JGE 1212H Fate of Contaminants in the Environment
JNC 2503H Environmental Pathways
JNP 1014Y Interdisciplinary Toxicology
JNP 1016H Graduate Seminar in Toxicology
JPG 1421H Health in Urban Environments
TPS 1837H Environmental Health, Transformative Higher Education and Policy Changes

Program Committee
Hilary Cunningham, BA, MA, PhD - Anthropology, Environment
Ingrid Stefanovic, BA, MA, PhD - Environment (Director)
Clare Wiseman, BS, MSc, PhD - Environment
Amrita Daniere, AB, MPP, PhD, MCIP - Geography
Virginia Maclaren, BA, MRP, MSc, PhD, MCIP - Geography
Ori Rotstein, MSc, MD, FRCS - Medical Science
Donald Cole - BSc, MSc, MD – Public Health Sciences
Environmental Engineering

Lead Faculty
Applied Science and Engineering

Degree Programs Offered
Chemical Engineering and Applied Chemistry – MASc, MEng, PhD
Civil Engineering – MASc, MEng, PhD
Mechanical and Industrial Engineering – MASc, MEng, PhD
Material Science and Engineering – MASc, MEng, PhD

Overview
The Environmental Engineering Collaborative Program (EECP) is an interdisciplinary collaborative program designed for students interested in taking a concentration of courses and conducting research in environmental engineering. It is open to MASc, MEng, and PhD students in the collaborating graduate programs listed above in the Faculty of Applied Science and Engineering.

About 30 full-time faculty members in these departments carry out advanced research and teach postgraduate courses in a wide range of environmental engineering specialties.

The Collaborative Program is administered and coordinated by the Division of Environmental Engineering and Energy Systems in conjunction with the participating departments and the Centre for Environment.

Students who complete the EECP program requirements will obtain the following statement on their transcript: “Completed Collaborative Program in Environmental Engineering”.

Contact and Address
Web: www.energy.engineering.utoronto.ca
E-mail: eep@ecf.utoronto.ca
Telephone: (416) 978-3532
Fax: (416) 946-7632

Environmental Engineering Collaborative Program
Division of Environmental Engineering and Energy Systems
Galbraith Building
Room 134, 35 St. George Street
University of Toronto
Toronto, Ontario M5S 1A4
Canada

Degree Programs
Master’s Degrees

Minimum Admission Requirements

- Students who wish to enrol in the Collaborative Program must first apply to and be accepted into a master’s program in one of the collaborating departments. (See the departmental entries in this calendar for details on admission requirements and degree programs.) Students should generally apply to the department that most closely matches their undergraduate degree.

- Once a student has registered in one of the collaborating departments, he or she may apply to and enrol in the EECP; this should be done no later than the end of the first session of study.

- Application forms for the collaborative program are available from the Division or any of the collaborating departments.

Program Requirements

- Degree requirements include course work and generally a research thesis or project, with details varying among the collaborating departments (see the departmental entries in this calendar).

- Graduate courses and research are available in a wide range of environmental engineering specialties offered by the collaborating departments. Many additional courses relevant to environmental engineering are offered by the Centre for Environment. See the calendar entries for the collaborating departments and the Centre for Environment for lists of courses. More detailed information on faculty, areas of research, and courses is available on the Division’s Web site and from the Division.

- The EECP requirements are:
  o Completion of a concentration of study in environmental engineering as demonstrated in course work and, where it is part of the degree requirement, a thesis or project. This is generally met through the student’s home department degree requirements.
  o Completion of one non-engineering course with substantial interdisciplinary content and student interaction that is related to the environment but is outside the student’s technical field. A list of approved courses is available on the Division’s Web site.
  o Participation in EDE 3000H, the Environmental Engineering Research Seminar Series, for at least two sessions. This is mandatory for MASc students and recommended for MEng students.
Collaborative Programs

Doctor of Philosophy

Minimum Admission Requirements

- Students who wish to enrol in the Collaborative Program must first apply to and be accepted into a doctoral program in one of the collaborating departments. (See the departmental entries in this calendar for details on admission requirements and degree programs.) Students should generally apply to the department that most closely matches their undergraduate degree.
- Once a student has registered in one of the collaborating departments, he or she may apply to and enrol in the EECP; this should be done no later than the end of the first session of study.
- Application forms for the collaborative program are available from the Division or any of the collaborating departments.

Program Requirements

- Degree requirements include course work and generally a research thesis or project, with details varying among the collaborating departments (see the departmental entries in this calendar).
- Graduate courses and research are available in a wide range of environmental engineering specialties offered by the collaborating departments. Many additional courses relevant to environmental engineering are offered by the Centre for Environment. See the calendar entries for the collaborating departments and the Centre for Environment for lists of courses. More detailed information on faculty, areas of research, and courses is available on the Division’s Web site and from the Division.
- The EECP requirements are:
  - Completion of a concentration of study in environmental engineering as demonstrated in course work and, where it is part of the degree requirement, a thesis or project. This is generally met through the student’s home department degree requirements.
  - Completion of one non-engineering course with substantial interdisciplinary content and student interaction that is related to the environment but is outside the student’s technical field. A list of approved courses is available on the Division’s Web site.
  - Participation in EDE 3000H, the Environmental Engineering Research Seminar Series, for at least two sessions.

Program Committee

Donald Kirk - BASc, MSc, PhD, PEng - Chemical Engineering & Applied Chemistry
Brent Sleep - BASc, MSc, PhD - Civil Engineering
Bryan Karney - BASc, MEng, PhD, PEng - Civil Engineering (Director)
Torstein Utigard - BSc, MSc, PhD, PEng - Materials Science & Engineering
Pierre Sullivan - BSME, MSME, PhD - Mechanical & Industrial Engineering
Environmental Studies

Lead Faculty
Arts and Science

Degree Programs Offered
Adult Education and Community Development – MA, MEd, EdD, PhD (pending)
Anthropology – MA, PhD
Chemical Engineering and Applied Chemistry – MASc, MEng, PhD
Chemistry – MSc, PhD
Ecology and Evolutionary Biology – MSc, PhD
Economics – MA
Forestry – MScF, MFC, PhD
Geography – MA, MSc, PhD
Geology – MA, PhD
Information Studies – MIST, PhD
Management – MBA, PhD
Philosophy – MA, PhD
Planning – MScPl
Political Science – MA, PhD
Religion – MA, PhD
Sociology – MA, PhD
Sociology and Equity Studies in Education – MA, MEd, EdD, PhD
Women and Gender Studies – MA

Overview
The graduate programs listed above participate in the Environmental Studies (ES) Collaborative Program which is offered through the Centre for Environment (CFE) at the University of Toronto. Graduate students admitted to a participating “home” department can apply to the Collaborative Program and pursue course work and research in environmental areas. The Centre currently has graduate students from across the disciplinary spectrum, including anthropology, social work, religious studies, law, management, geography, chemistry, biology, and geology.

The Centre offers a unique and comprehensive program of graduate study. By utilizing the University’s extensive library holdings and faculty resources, it offers one of North America’s most engaging and cross-disciplinary programs in the environment. One of the compelling strengths of the Centre’s program is the interdisciplinary environment in which teaching and research is conducted. For example, in its core courses, professors from the humanities team teach with faculty from the social sciences, engineering, biology, and chemistry. Students are both able to specialize in an area of environmental research and gain exposure to a wide range of intellectual and methodological disciplines focused on environmental issues.

Graduate students from home departments other than those listed on the Web site can also apply for a collaborative degree once they have received notice of acceptance from the University of Toronto. Interested students should discuss this possibility with Pavel Pripa, the Graduate Student Advisor (416-978-3475 or pavel.pripa@utoronto.ca).

Contact and Address
Web: www.environment.utoronto.ca/Graduate/Programs/
EnvironmentalStudiesCollaborativeProgram.aspx
E-mail: centre.environment@utoronto.ca
Telephone: (416) 978-3475
Fax: (416) 978-3884

Centre for Environment
Earth Sciences Centre
Room 1016V, 33 Willcocks Street
University of Toronto
Toronto, Ontario M5S 3E8
Canada

Degree Programs

Master’s and PhD Degrees

Minimum Admission Requirements
- Students who wish to enrol in the Environmental Studies (ES) Collaborative Program offered by the Centre for Environment must first apply to and be accepted into a master’s or doctoral program in a degree granting unit, also called a “home department.” Information about applying to a home department can be found at the School of Graduate Studies Web site: www.sgs.utoronto.ca.
- Prospective students are strongly encouraged to submit copies of the documents indicated on the Centre’s Web site by the application deadline established by the home department. Please contact the home department to which you intend to apply in order to confirm its application deadline. The Centre for Environment also allows potential students to enrol in its ES Collaborative Program beyond the deadline set by their home department.
- Once a student has officially registered in one of the collaborating home departments, he or she may enrol in the ES collaborative program, provided the student is able to complete the program requirements within the time limits set for the completion of his or her degree program. Many students enrol in the ES collaborative program at the CFE Orientation Day, usually held in September during the first week of each academic year.

Program Requirements
- Environmental Studies Collaborative Program students must complete requirements in addition to the degree requirements of their home departments. Typically, students complete up to 1.0 full-course equivalent (FCE) and conduct research on an environmental topic. The Centre also offers students the opportunity to complete an internship in fulfillment of the collaborative program. Specific degree requirements are listed on the Centre’s Web site under the Environmental Studies Collaborative Program.
Collaborative Programs

- Students who successfully complete the ES program receive a special notation on their transcript.

Courses
The Centre for Environment offers individual credit courses that are open to graduate students from all parts of the University, subject to enrolment limits. With the exception of the core course, not all courses are offered every year. Graduate students enrolled in the Environmental Studies Collaborative Program are also allowed to take elective courses listed under the Environment and Health Collaborative Program toward completing their Environmental Studies Collaborative Program requirements (these are listed under Environmental Health Collaborative Program in this Calendar).

Core Course
ENV 1001H Environmental Decision Making

CFE Elective Courses
ENV 1002H Environmental Policy
ENV 1004H Urban Sustainability
ENV 1005H Business and Environmental Politics
ENV 1008H Worldviews and Ecology
ENV 1444H Capitalist Nature
ENV 1701H Environmental Law
ENV 1707H Environmental Finance and Sustainable Investing
ENV 1410H Analytical Environmental Chemistry
ENV 2000H,Y Topics in Environmental Studies
ENV 2002H Special Topics—Environmental Studies
ENV 4444Y+ Internship
ENV 5555Y+ Research Paper

Other Elective Courses

Adult Education and Counselling Psychology
AEC 1104H Community Education and Organizing
AEC 1131H Special Topics in Adult Education (Master’s): Environmental Adult Education
AEC 1160H Introduction to Transformative Learning Studies
AEC 1178H Practitioner/Ecological Identity and Reflexive Inquiry
AEC 3176H Sense of Place in Professional and Natural Contexts

Chemical Engineering and Applied Chemistry
JNC 2503H Environmental Pathways

Forestry and Social Work
JFS 1460H Community Based Natural Resource Management

Geography
JGE 1413H Environmental Impact Assessment
JGE 1420H Urban Waste Management
JGE 1609H Cities, Industry and Environment
GGR 1214H Global Ecology and Biogeochemical Cycles

Geography and Planning
JPG 1404H Issues in Global Warming
JPG 1406H Energy Supply and Use
JPG 1414H Cities as Ecosystems
JPG 1419H Aboriginal/Canadian Relations in Environment and Resource Management

History
HIS 1111H Topics in North American Environmental History

Mechanical and Industrial Engineering
JEI 1901H Technology, Society, and the Environment I
JEI 1902H Technology, Society, and the Environment II

Political Science
JPV 1201H Politics, Bureaucracy, and the Environment

Philosophy
JVP 2147H Environmental Philosophy

Sociology and Equity Studies in Education
SES 1909H Eco-Sociology

Program Committee
Ingrid Stefanovic, BA, MA, PhD - Environment (Director)
Hilary Cunningham, BA, MA, PhD - Anthropology, Environment
Marilyn Laiken, BA, MA, PhD - Adult Education & Counselling Psychology
Janice Boddy, BA, MA, PhD - Anthropology
Douglas Reeve, BSc, MASc, PhD, PEng - Chemical Engineering & Applied Chemistry
Scott Mabury, BSc, PhD - Chemistry
James Thomson, AB, MS, PhD - Ecology and Evolutionary Biology
Arthur Hosios, BEng, MA, MEng, PhD - Economics
C. Tattersall Smith, BA, MS, PhD - Forestry
Amrita Daniere, AB, MPP, PhD, MCIP - Geography
Alexander Cruzen, BSc, PhD - Geology
Jens-Erik Mai, BA, MLIS, PhD - Information Studies
Roger Martin, AB, MBA - Management
Richard DiFrancesco, BA, MA, PhD - Planning
David Cameron, MSc, BA, PhD - Political Science
John Kloppenborg, BA, MA, PhD - Religion
Blair Wheaton, BA, MA, PhD - Sociology
Sandra Acker, BA, MA, PhD - Sociology and Equity Studies in Education

+Extended course. For academic reasons, course work is extended into session following academic session in which course is offered.

444 Environmental Studies
Ethnic and Pluralism Studies

Degree Programs Offered

Anthropology - MA, MSc, PhD
European, Russian and Eurasian Studies - MA, PhD
Geography - MA, PhD
History - MA, PhD
Industrial Relations and Human Resources - MIRHR, PhD
Nursing Science - MN, PhD
Political Science - MA, PhD
Religion - MA, PhD
Social Work - MSW, PhD
Sociology - MA, PhD
Sociology and Equity Studies in Education - MA, PhD

Overview

The graduate programs listed above participate in the Ethnic and Pluralism Studies Collaborative Program at the University of Toronto. Participating graduate units in the program contribute courses and provide facilities and supervision for graduate research. Upon successful completion of the requirements, students receive the notation “Completed Collaborative Program in Ethnic and Pluralism Studies” on their transcripts, in addition to the master’s or doctoral degree in their departmental area.

Contact and Address

Web: www.utoronto.ca/ethnicstudies
E-mail: ethnic.studies@utoronto.ca
Telephone: (416) 978-4783
Fax: (416) 978-3963

Collaborative Program in Ethnic and Pluralism Studies
Department of Sociology
University of Toronto
725 Spadina Avenue
Toronto, Ontario M5S 2J4
Canada

Degree Programs

Master’s Degrees

Minimum Admission Requirements

- Applicants who wish to enrol in the Collaborative Program must apply to and be admitted to both the Collaborative Program and a graduate degree program in one of the collaborating graduate units.
- Applicants to the Master of Arts, Master of Industrial Relations and Human Resources, Master of Nursing, Master of Science, Master of Social Work are accepted by the participating graduate unit under the general regulations.

Program Requirements

- Students must follow a program of studies acceptable to both the participating graduate unit and the Ethnic and Pluralism Studies Program.
- Collaborative program requirements may be met concurrent with, or in addition to, departmental requirements. Students should consult specific departmental listings for information.
- 1.0 full-course equivalent (FCE) in ethnicity, of which at least 0.5 FCE will be in a discipline other than the one in which the student is enrolled. Normally, these courses are taken as options within regular departmental or faculty degree requirements, not as additional courses.
- A coordinating 0.5 FCE seminar in ethnicity. The seminar is the place to discuss, compare, and bring together the various approaches to the study of ethnicity. As well, students will be expected to present and discuss their projects.
- When a practicum is required, it will focus on ethnicity.
- It is understood that the major paper or thesis as required by the graduate unit will be in an ethnic studies area.

Doctor of Philosophy

Minimum Admission Requirements

- Applicants who wish to enrol in the Collaborative Program must apply to and be admitted to both the Collaborative Program and a graduate degree program in one of the collaborating graduate units.
- Applicants to the Doctor of Philosophy degree program are accepted under the general regulations.

Program Requirements

- Students must follow a program of studies acceptable to both the participating graduate unit and the Ethnic and Pluralism Studies Program.
- Collaborative program requirements may be met concurrent with, or in addition to, departmental requirements. Students should consult specific departmental listings for information.
- 2.0 full-course equivalents (FCE) in ethnicity, including master’s-level courses, of which at least 1.0 will be in disciplines other than the one in which the student is enrolled. Normally, these courses are taken as options within regular departmental or faculty degree requirements, not as additional courses.
- A coordinating 0.5 FCE seminar in ethnicity. The seminar is the place to discuss, compare, and bring together the various approaches to the study of ethnicity. As well, students will be expected to present and discuss their projects. Students who have taken this course for the master’s degree need not repeat it.
When the student’s graduate unit requires more than one comprehensive examination, one of the examinations will be in ethnicity.

When there are no comprehensive examinations, but an examination on the thesis proposal is required, the examination will focus on ethnicity, and in all cases the thesis will be on subject matter dealing with ethnicity.

The PhD thesis will focus on ethnicity. The supervisor of the thesis committee will be a specialist in the area of ethnicity.

Courses

1. Courses eligible for credit toward meeting program requirements in Ethnic and Pluralism Studies are listed below.

2. Students should check with the professor responsible for each course since a prerequisite may be required.

3. Not all courses are offered each year. Please consult the Program office or the appropriate graduate unit for course availability.

4. Students wishing to use courses other than those listed below for credit toward meeting program requirements must submit a formal request in writing.

Coordinating Seminar

JTH 3000H Ethnic Relations Theory, Research, and Policy

Anthropology

ANT 6003H Critical Issues in Ethnography I
ANT 6004H Critical Issues in Ethnography II
ANT 6034H Advanced Research Seminar IV (Ethnicity)
ANT 6040H Approaches to Field Work I
ANT 6041H Approaches to Field Work II
ANT 6050H Reading Course in Specific Area and Theory I

Economics

ECO 2800H Labour Economics I (Prerequisite: an undergraduate course in statistics and a graduate course in applied statistics.)

Geography

PLA 1503H Planning and Social Policy
JPG 1505H The Multicultural City: Diversity, Policy, and Planning
JPG 1506H State/Space/Difference: Understanding the New Social Geography
GGR 1712H Historical Geography of Ethnic Groups in Canada

History

HIS 1102H Spiritual Invasion: Natives of the Americas Confront Christianity
HIS 1120H Topics in Aboriginal/Non-Aboriginal Relations in Canada
HIS 1164H Irish Migration to Canada: Sources and Methods

HIS 1166H Immigrants, Minorities, and the Racialized Other: Canada in a Comparative Context (Prerequisite: any previous course in the history of Canada.

HIS 1274H The Nazis, Occupied Europe, and the Jews
HIS 1287H Polish Jews Since the Partitions of Poland (joint graduate/undergraduate)
HIS 1297H Problems of National Survival in Eastern Europe Since 1848
HIS 1528H Crossing Boundaries: Race, Ethnicity, Class, and Gender in America, 1880-1930
HIS 1545H Race, Segregation and Protest: South Africa and the United States

Industrial Relations and Human Resources

IRE 3630H Diversity and Inclusiveness in the Workplace

Law

Participation in LAW courses is at the discretion of the Faculty of Law upon presentation, to the Faculty of Law Records Office, of a signed permission form from the student’s home department. Note that preference is given to JD students and that many law courses are full by the end of the Faculty of Law add/drop period.

LAW 410H Discrimination Law: Equality in the Private Sector
LAW 456H Canadian Migration Law

Nursing Science

NUR 1013H Transcultural Health Care Issues
NUR 1014H Politics of Aboriginal Health
NUR 1068H Youth and Mental Health Promotion

Political Science

POL 2001Y Problems of Political Community
POL 2026H Topics in Political Thought I: Nationalism and Political Philosophy
POL 2038Y Problems of Pluralism and Equality
POL 2127H Canadian Theories of Multiculturalism
POL 2321H Topics in Comparative Politics I: Citizenship and Immigration in Europe and North America
POL 2324H Ethnonationalism and State-Building: The Communist and Post-Communist Experience
POL 2413Y Politics, Culture, and Identity in Southeast Asia

Religion

RLG 2037H Religion and Healing
RLG 3931H Topics in North American Religions

Social Work

SWK 4210H Promoting Empowerment: Working at the Margins
SWK 4304H Globalization and Trans-nationalization: Social Work Responses Locally and Globally

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Collaborative Programs

SWK 4617H Cross-Cultural Social Work Practice
SWK 4658H Social Work with Immigrants and Refugees
SWK 4801H Special Studies I
SWK 4802H Special Studies II

**Sociology**
SOC 6002H Immigration I: Contemporary International Migration
SOC 6003H Immigration II: Sociology of Immigration, Ethnicity and Employment
SOC 6009H Ethnicity I
SOC 6016H Social Demography I
SOC 6109H Ethnicity II
SOC 6116H Social Demography II

**Sociology and Equity Studies in Education**
SES 1921Y The Principles of Anti-Racism Education
SES 1926H Race, Space and Citizenship: Research Methods
SES 3933H Theorizing Transnationality: Feminist Perspectives
JSA 5147H Language, Nationalism and Post-Nationalism
JTE 1952H Language, Culture, and Education

**Theory and Policy Studies in Education**
TPS 1428H Immigration and the History of Canadian Education
TPS 1429H Ethnicity and the History of Canadian Education
TPS 3428H Minority Concerns and Education in Canadian History: Selected Topics

**Program Committee**
Michael Levin - BA, MA, PhD - Anthropology
Michael Baker - BCom, MA, PhD, Royal Bank Chair in Public and Economic Policy - Economics
Minelle Mahtani - BA, PhD - Geography
Francia Iacovetta - BA, MA, PhD - History
Nan Weiner - BSB, MA, PhD - Industrial Relations & Human Resources
Audrey Macklin - BA, LLB, LLM - Law
Nazilla Khanlou - RN, BScN, MSc, PhD - Nursing Science
Jeffrey Kopstein - PhD, MA, BA - Political Science
Donald Forbes - BA, MA, PhD - Political Science
Amira Mittermaier - MA, PhD - Religion
Jeffrey Reitz - BS, PhD, FRSC, Robert F. Harney Professor of Ethnic, Immigration & Pluralism Studies - Sociology (Director)
Eric Fong - BA, MA, PhD - Sociology
Sherene Razack - BA, MA, PhD - Sociology and Equity Studies in Education
Izumi Sakamoto - BA, MA, MSW, MS, PhD - Social Work
Collaborative Programs

Genome Biology and Bioinformatics

Lead Faculty
Medicine

Degree Programs Offered
Biochemistry – PhD
Cell and Systems Biology – PhD
Chemical Engineering and Applied Chemistry – PhD
Computer Science – PhD
Ecology and Evolutionary Biology – PhD
Biomaterials and Biomedical Engineering – PhD
Laboratory Medicine and Pathobiology – PhD
Medical Biophysics – PhD
Medical Science – PhD
Molecular Genetics – PhD

Overview
The recent elucidation of the genomes of many organisms has led to the appreciation that our knowledge of the function of the proteome and other "omes" of any given organism is far from complete. A wide range of computational, theoretical, biochemical, structural, cell biological and genetic approaches need to cooperate to establish the connections between sequence, structure and function. The Collaborative Program in Genome Biology and Bioinformatics addresses this need for cooperation with a coherent course of study that educates and trains doctoral graduate students across these diverse disciplines. The program serves as a model for a content-driven, trans-departmental unit that responds to the University's need to adapt to cutting-edge scientific developments.

The graduate programs listed above participate in the Collaborative Program in Genome Biology and Bioinformatics. Upon successful completion of the Ph.D. requirements of the host department and the program, students receive the notation "Completed Program in Genome Biology and Bioinformatics " on their transcript.

Contact and Address
Web: www.biochemistry.utoronto.ca/cgb/
E-mail: rob.reedijk@utoronto.ca
Telephone: (416) 978-0774

Mr. Rob Reedijk
Administrative Coordinator
Collaborative Program in Genome Biology and Bioinformatics
Department of Biochemistry
Room 5207, Medical Sciences Building
University of Toronto
Toronto, Ontario M5S 1A8
Canada

Degree Programs

Doctor of Philosophy

Minimum Admission Requirements
- Applicants who wish to enrol in the collaborative program must apply to and be admitted to both the collaborative program and a graduate degree program in one of the collaborating departments. Since this is a PhD program, students must be registered in the doctoral program of one of the host departments and must be undertaking research with a significant genome biology and/or bioinformatics component under the supervision of a member of the program.

Program Requirements
- Complete a PhD thesis and any core courses as required by the student's host department.
- Complete the interdisciplinary courses or alternates (one of JBB 2026H/JBZ 1472H/JTB 2010H/JZB 1521H; and one of BME 1458H/CSC 2417H/CSC 2418H/CSC 2515H/JTB 2020H). These courses may be taken in place of some host department courses after a student obtains written permission from the host department.
- Participate in the seminar series and participate in collaborative traineeships in which an aggregate time of at least four months is spent in a collaborating laboratory, thematically working on an aspect of the thesis project but with a complementary method. The goal of the collaborative traineeship is ideally a joint publication between the two member labs.

Courses
Students should take one genome biology/"omics" course (Group I) and one computational biology/bioinformatics course (Group II) from the following:

Group I
JBB 2026H Protein Structure, Folding and Design
JBZ 1472H Computational Genomics and Bioinformatics
JTB 2010H Proteomics and Functional Genomics
JZB 1521H Molecular Evolution

Group II
BME 1458H Pattern Discovery Methods for Biomedical Engineering
CSC 2417H Algorithms for Genome Sequence Analysis
CSC 2418H Computational Structural Biology
CSC 2515H Machine Learning
JTB 2020H Applied Bioinformatics

448 Genome Biology and Bioinformatics
Program Committee
Boris Steipe - MD, PhD/Biochemistry
Christopher Yip - BASc, MSc, PhD, PEng, Canada
Research Chair/Biomaterials & Biomedical Engineering,
Radhakrishnan Mahadevan - BTech, PhD, Chemical
Engineering & Applied Chemistry
Nicholas Provart - BSc, MSc, PhD/Cell & Systems
Biology (Director)
Michael (Mikhail) Brudno - BA, MSc, PhD/Computer
Science
Belinda Chang - BA, PhD, Canada Research Chair/
Ecology & Evolutionary Biology
Jeremy Squire - BSc, MSc, PhD, JC Boileau Grant
Chair in Oncologic Pathology/Laboratory Medicine &
Pathobiology
Elizabeth Tillier - PhD/Medical Biophysics
York Po-Chee Pei - MD, MSc, FRCP(C)/Medical Science
Andrew Emili - BSc, MSc, PhD/Molecular Genetics
Collaborative Programs

Geology and Physics

Lead Faculty
Arts and Science

Degree Programs Offered
Geology – MSc, PhD
Physics – MSc, PhD

Overview
The graduate programs listed above participate in the Collaborative MSc and PhD Programs in Geology and Physics. These programs foster graduate education in areas of study that overlap traditional departmental boundaries.

Students who successfully complete the requirements of the collaborative program will receive the notation “Completed Collaborative Program in Geology and Physics” on their transcript.

Contact and Address
E-mail: bailey@geology.utoronto.ca
Telephone: (416) 978-3231
Fax: (416) 978-7606

Collaborative Program in Geology and Physics
c/o R. C. Bailey
McLennan Physical Laboratories
Room 501, 60 St. George Street
University of Toronto
Toronto, Ontario M5S 1A7
Canada

Degree Programs

Master of Science

Minimum Admission Requirements
• Applicants who wish to enrol in the collaborative program must apply to and be admitted to both a graduate degree program in one of the collaborating departments, this being either Geology or Physics, and to the collaborative program. Note that MSc students enrolled in Option I in Physics or in the course-only option in Geology are not eligible to enrol in the collaborative program.
• Applicants must submit a supplementary brief application form, available from either home department or the collaborative program office, to the collaborative program Director.
• Normal deadlines for application to the School of Graduate Studies apply. Students who have already been admitted to one of the two home departments may apply to the collaborative program until October 1.

Program Requirements
• Students must meet all respective degree requirements of the School of Graduate Studies, the home department, and the collaborative program.
• The MSc research, thesis, and thesis defence requirements are the same as those of the home department.
• The lecture course requirements are the Geology graduate seminar course in addition to the course requirements of the home department of which at least 1.0 full-course equivalent (FCE) must be taken in the non-home department.
• The supervised research project and associated report or thesis will be completed under the regulations of the home department.
• Students are expected to attend the regular seminar series of both the Geology Department and the Geophysics Lab in the Physics Department and to participate in the graduate student seminar programs of both the Geology Department and the Geophysics Lab.
• Program requirements are normally completed within 12 months of entry to the program.

Doctor of Philosophy

Minimum Admission Requirements
• Applicants who wish to enrol in the collaborative program must apply to and be admitted to both the collaborative program and a graduate degree program in one of the collaborating departments, this being either Geology or Physics.
• Applicants must submit a supplementary brief application form, available from either home department or the collaborative program office, to the collaborative program Director.
• Normal deadlines for application to the School of Graduate Studies apply. Students who have already been admitted to one of the two home departments may apply to the collaborative program until October 1.

Program Requirements
• Students must meet all respective degree requirements of the School of Graduate Studies, the home department, and the collaborative program.
• The PhD research, thesis, and thesis defence requirements are the same as those of the home department.
• The lecture course requirement is 0.5 full-course equivalent (FCE) above the requirement of the home department, and must include the Geology graduate seminar course, and at least 1.0 (FCE) in the non-home department.
• Students are expected to attend the regular seminar series of both the Geology Department and the Geophysics Lab in the Physics Department and to participate in the graduate student seminar programs of both the Geology Department and the Geophysics Lab.
• Program requirements are normally completed within 12 months of entry to the program.

450 Geology and Physics
Collaborative Programs

Program Committee
Richard Bailey - BSc, PhD - Geology and Physics
(Director)
Russell Pysklywec - BSc, PhD - Geology
Theodore Shepherd - BSc., PhD - Physics
Global Health

Degree Programs

Doctor of Philosophy

Admission Requirements
• Applicants must meet the admission requirements of both the home graduate program in which they are registered as well as the collaborative program.
• Applicants must be admitted to a doctoral program in one of the home departments before they may apply to the Collaborative Doctoral Program in Global Health.

Program Requirements
• Meet all the degree requirements of the School of Graduate Studies, the home graduate unit, and the Collaborative Doctoral Program in Global Health.
• Successfully complete:
  o NUR1083H Comparative Politics of Health and Health Policy in a Globalizing World
  o one elective (outside of the home department) selected from the list below
  o participation in 0.5 full-course equivalent (FCE) global health research seminar series for the equivalent of two academic years
  o a thesis on an issue related to global health, to be approved by both the home unit and the collaborative program committee

Courses
Not all courses are offered every year. Please refer to the participating graduate units' Web sites for a current list of course offerings.

Core Course
NUR1083H Comparative Politics of Health Policy in a Globalizing World
(Where possible, this required core course may be taken as an elective within regular departmental degree requirements, not as an additional course.)

Elective Courses

Anthropology
ANT 6003H Critical Issues in Ethnography I
ANT 6004H Critical Issues in Ethnography II
ANT 6023H Governmentality, Development and the Improvement of the World
ANT 6032H Social Movements: Interrogating Power and Protest in a Global Context

Bioethics
CHL 5121H Genomics, Bioethics and Public Policy
MSC 3003Y Empirical Approaches to Bioethics
MSC 3010Y International Research Ethics
PHL 2146Y Topics in Bioethics
Collaborative Programs

JHM 1000H Issues Analysis in Interdisciplinary International Health Research

Health Policy, Management and Evaluation
HAD 5768H International Perspectives on Health Services Management
HAD 5770H Program Planning and Evaluation
HAD 5771H Resource Allocation Ethics
HAD 5774H Comparative Health Care Systems

Law
Participation in LAW courses is at the discretion of the Faculty of Law upon presentation, to the Faculty of Law Records Office, of a signed permission form from the student’s home department. Note that preference is given to JD students and that many law courses are full by the end of the Faculty of Law add/drop period.
LAW 294H The Law and Praxis of International Human Rights
LAW 301H Women’s Rights in International Law
LAW 386H Reproductive and Sexual Health Law
LAW 388H Public Health Law
LAW 576H Can there be Universal Human Rights

Nursing
NUR 1024H Foundations of Qualitative Inquiry
NUR 1025H Doing Qualitative Research: Design and Data Collection
NUR 1082H Knowledge Production in Nursing and Health
NUR 1083H Comparative Politics of Health Policy in a Globalizing World (required course)

Pharmacy
PHM 1124H The Power and Politics of Global Pharmaceutical Policy
PHM 1125H Complementary/Alternative Medicine: Health System and Policy Issues

Political Science
JPD 2232H International Governance
JPE 2408Y Political Economy of International Development
JPF 2430Y Cities
POL 2205H Topics in International Politics I
POL 2207H Topics in International Politics III
POL 2212Y Canada and the Third World
POL 2217Y Politics of the International System
POL 2226H Ethics and International Relations
POL 2318H Comparative Public Policy: Selected areas
POL 2409Y Politics and Planning in third world Cities

Public Health Sciences
CHL 5115H Qualitative Analysis and Interpretation
CHL 5117H A Global Perspective on the Health of Women and Children
CHL 5118H International Health, Human Rights and Peace-Building
CHL 5411H International Health
CHL 5419H Empirical Perspectives on Social Organization and Health

CHL 5420H Global Health Research
CHL 5421H Aboriginal Health
CHL 5702H History of International Health
CHL 5903H Environmental Health
CHL 7001H History of International Health

Program Committee
Daniel Sellen - BA, MA, PhD - Anthropology
Holly Wardlow - BA, MPH, PhD - Anthropology
Andrew Howard - MD, MSc, FRCS(C) - Health Policy, Management & Evaluation
Lorne Sossin - BA, MA, LLB, PhD, LLM, JSD - Law
Denise Gastaldo - BScN, MA, PhD - Nursing Science
Carles Muntaner - MD, PhD - Nursing Science
Jillian Cohen-Kohler - BA, MA, PhD - Pharmaceutical Sciences
J. Orbinski - MA, MSc, MD – Public Health Sciences
Joseph Wong - BA, MA, PhD, Canada Research Chair - Political Science
Anne-Emanuelle Birn - BA, MA, DSc - Public Health Sciences
Donald C. Cole - MSc, MD - Public Health Sciences
Health Care, Technology and Place

Degree Programs Offered

- Biomedical Engineering – PhD
- English – PhD
- Health Policy, Management and Evaluation – PhD
- Medical Science – PhD
- Nursing Science – PhD
- Pharmaceutical Sciences – PhD
- Public Health Sciences – PhD
- Rehabilitation Science – PhD
- Social Work – PhD

Overview

The graduate programs listed above participate in the HCTP Collaborative Program. The objectives of the Health Care, Technology and Place (HCTP) Collaborative Program are to:

1. prepare doctoral students to understand, explain, and improve health outcomes associated with geographically-dispersed and technologically-mediated health care;
2. bridge knowledge gaps among doctoral students working in the life sciences, physical sciences, social sciences, and humanities who are concerned with the interconnectedness of bodies, technologies, places, and modes of work in contemporary health care; and
3. provide mentorship in transdisciplinary scholarship, including leadership skills, collaboration, grant writing, and knowledge exchange. Ultimately the goal is to facilitate research conducted by scientifically-informed humanists and philosophically-informed physical and social scientists.

Collaborative programs are administered under the auspices of the School of Graduate Studies. Students who wish to enrol in the collaborative program must apply to and be admitted to both the collaborative program and a graduate degree program in one of the collaborating departments. Applicants may apply concurrently to the participating home graduate unit and to the Health Care, Technology and Place Collaborative Program. Students follow a course of study acceptable to both the home unit and the HCTP Collaborative Program.

Contact and Address

Web: www.hctp.utoronto.ca
E-mail: hctp.program@utoronto.ca
Telephone: (416) 978-2067
Fax: (416) 946-5960

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program and the requirements of the doctoral program in their home graduate unit. It will be up to each participating home department to determine whether HCTP courses are completed in addition to the department's customary course requirements or as a part of those requirements.

Core Courses
JNH 5001H Health Care Settings, Sites and Human Well-Being
JNH 5002H The Body, Health Care, Technology and Place
BME 1456H Changing Health Care Technologies, People and Places
NUR 1031H Technology and Place in Contemporary Health Care Work

Program Committee
Geoffrey Fernie - BSc, PhD, PEng, CCE - Biomedical Engineering
Elizabeth Harvey - BA, MA, PhD - English
Peter C Coyte - BA, MA, PhD - Health Policy, Management & Evaluation (Director)
Ori Rotstein - MSc, MD, FRCS(C) - Medical Science
Ellen Hodnett - RN, PhD, FCAHS - Nursing Science
Linda MacKeigan - BScPhm, PhD - Pharmaceutical Sciences
Blake Poland - BA, MA, PhD - Public Health Sciences
Denise Reid - BSc(OT), MEd, PhD - Rehabilitation Science
Adrienne Chambon - BA, MA, BSW, PhD - Social Work
Health Services and Policy Research

Degree Programs

Master's Degrees

Minimum Admission Requirements

- Students who wish to enrol in the Collaborative Program must apply to and be admitted to both the Collaborative Program and a graduate degree program in one of the collaborating departments.
- Master's students are accepted under the School of Graduate Studies general regulations and the specific criteria of the participating unit.
- An overall B+ average in the last two years of an appropriate four-year University of Toronto bachelor's degree, or its equivalent from a recognized university.
- An interest in health services and policy research outlined in an autobiographical letter including the student's reasons for becoming a health services or policy researcher.

Program Requirements

- Students follow a program of study acceptable to both the participating unit and the Collaborative Program.
- Students must complete the requirements of the Collaborative Program (completion of a practicum and participation in one Summer Institute) in addition to those requirements for the masters degree program specified by their home graduate unit.
- Students are required to write a thesis under the supervision of a core faculty member of the Collaborative Program. The thesis must address the theme of health services and policy research.
- In addition to the requirements for the degree program specified by the home graduate unit, students must complete a practicum and participate in one Summer Institute hosted by the OTC.

Doctor of Philosophy

Minimum Admission Requirements

- Students who wish to enrol in the Collaborative Program must apply to and be admitted to both the Collaborative Program and a graduate degree program in one of the collaborating departments.
- Doctoral students are accepted under the School of Graduate Studies general regulations and the specific criteria of the participating unit.
- Applicants are required to:
  - demonstrate academic excellence in completed courses (B+ average in graduate courses), scholarships and academic awards received;
  - demonstrate aptitude for health services and policy research (letter of recommendation from a previous professor or thesis supervisor commenting on the student’s academic abilities and likelihood for success as a health services researcher);
Collaborative Programs

- outline career plans (in an autobiographical letter including their reasons for becoming a health services researcher and their career plans); and
- propose a plan of study in the Collaborative Program.

- Students who complete the Collaborative Program at the master's level are not eligible to participate at the PhD level.

Program Requirements

- Students follow a program of study acceptable to both the participating unit and the Collaborative Program.
- Students must complete the requirements of the Collaborative Program (completion of a practicum and participation in one Summer Institute) in addition to those requirements for the doctoral degree program specified by their home graduate unit.
- Students are required to complete a dissertation under the supervision of a core faculty member of the Collaborative Program. The dissertation must address the theme of health services and policy research.
- In addition to the requirements for the degree program specified by the home graduate unit, students must complete a practicum and participate in one Summer Institute hosted by the OTC.

Courses

1. Courses offered by the University of Toronto departments involved in the OTC are listed in the separate calendar entries of Health Policy, Management and Evaluation; Medical Science, Nursing Science; Pharmaceutical Sciences; Public Health Sciences; Rehabilitation Science; and Social Work.
2. Research and Policy Practicum - by working with a health services and policy research team, the student develops practical skills in completing a research and/or policy project and effectively communicating the results of that research to stakeholders.
   HSR 1000H Research and/or Policy Practicum
3. Summer Institute - a five-day workshop held at one of the participating universities. All students must participate and are graded on a Credit/No Credit (CR/NCR) basis.
   HSR 1002H HSR Summer Institute

Program Committee

Rhonda Cockerill - BA, MA, PhD/Health Policy, Management & Evaluation (Director)
Peter C Coyte - BA, MA, PhD/Health Policy, Management & Evaluation
Arlene Bierman - BA, MS, MD/Medical Sciences
Diane Doran - RN, BA, MHSc, PhD/Nursing Science
Paula Goering - RN, BSN, MSN, PhD/Nursing Science
Linda-Lee O’Brien-Pallas - BScN, MScN, PhD, National Research Chair in Nursing Human Resources/Nursing Science
Heather Boon - BScPhm, PhD/Pharmaceutical Sciences
Bart Harvey - BA, MD, MSc, FRCP(C), FACP, PhD/Public Health Sciences
Susan Jaglal - BSc, MSc, PhD/Rehabilitation Science
Charmaine Williams - BSc, BA, MSW, PhD/Social Work
International Relations

Degree Programs

Master’s Degrees

Minimum Admission Requirements

• Admission is subject to the approval of the graduate department concerned and the collaborative program.
• A cumulative average of A- is normally required for admission.
• Applicants will normally be expected to have completed and passed an introductory course in microeconomics and macroeconomics at the undergraduate level.

Program Requirements

• Students complete a total of 2.5 full-course equivalents (FCE) as follows: 1.5 required core FCE (in international economics, history and philosophy of international relations, and public international law) and 1.0 elective FCE (in international relations).
• Additional degree requirements vary from department to department. Details of additional requirements are available from the Centre for International Studies, from the departmental graduate or MA supervisors, or from the collaborative program’s Web site listed above.
• Students must demonstrate competence in a second language.

Combined Juris Doctor/Master of Arts, Law and Political Science (Specialization in International Relations)

Minimum Admission Requirements

• Admission decisions to the combined program are made at three separate locations: Faculty of Law, Department of Political Science, and the Collaborative MA in International Relations.
• Applicants must apply for admission to all three graduate programs independently, and students must meet the full admission requirements of all three departments before gaining admission to the combined program.

Program Requirements

• Year 1 consists of the first year law curriculum.
• Years 2 and 3 consists of the compulsory requirements of the upper years of the JD and the course requirements for the combined program.
Program Committee
Gilles Duranton, BSc, MA, MSc, PhD/Economics
Wesley Wark, BA, MA, PhD/History
Karen Knop, BSc, LLB, LLM, SJD/Law (Combined Program Director)
Steven Bernstein, BA, MA, PhD/Political Science
Stephen Clarkson, BA, MA, D de Rech/Political Science
Ronald Deibert, BA, MA, PhD/Political Science (Director)
John Kirton, BA, MA, PhD/Political Science
Louis Pauly, BA, MA, MSc, MA, PhD, Canada Research Chair/Political Science
David Welch, BA, AM, PhD, Ignatieff Chair/Political Science
Harriet Friedmann, AB, MA, PhD/Sociology
Collaborative Programs

Jewish Studies

Degree Programs

Doctor of Philosophy

Minimum Admission Requirements
- Applicants who wish to enrol in the collaborative program must apply to and be admitted to both the collaborative program and a graduate degree program in one of the collaborating departments. Students may apply to the collaborative program as soon as they have been admitted to the doctoral program in one of its constituent departments.
- In addition to the admission requirements of the home department, sufficient linguistic knowledge, textual training, and familiarity with relevant scholarship in order to carry out graduate work in Jewish Studies within the chosen field are required.

Program Requirements
- 1.0 full-course equivalent (FCE) as follows: 0.5 FCE within and 0.5 FCE outside of the student’s home department. Valid courses include regular offerings and occasional offerings by visiting professors of Jewish Studies.
- JSP 1000H Jewish Studies Seminar: core course in research topics and methods in Jewish Studies.
- A doctoral dissertation that deals substantively with topics in Jewish Studies.

Courses
Courses marked with # are taught by Program faculty and incorporate themes within and outside of Jewish Studies. Not all courses are offered every year.

Core Course
JSP 1000H Jewish Studies Seminar

Anthropology
ANT 5146H Colonial and Post-Colonial Discourses

Comparative Literature/Germanic Languages and Literatures
JGC 1750H Modernity and its Discontents

English
ENG 1027H Construction of the Other in Medieval Literature (Jews and Muslims)
ENG 5023H Elegy, the Elegiac and the Judaic in Twentieth-Century Anglo-American Poetry
ENG 5573H Performance and Identity in America
ENG 5578H Parvenus and Passing in Modern American Literature

Courses are taught by Program faculty and incorporate themes within and outside of Jewish Studies. Major research and writing assignments for such courses must focus on topics in Jewish Studies.

Overview
The Collaborative Program in Jewish Studies offers both broad and intensive exposure to the constituent fields within Jewish Studies. Because of Jewish civilization’s vast chronological and geographical range, as well as its constant interaction and cross-fertilization with other cultures, graduate work within Jewish Studies demands intensive exposure to a wide variety of languages, textual traditions, and scholarly disciplines.

The collaborative program involves the graduate doctoral programs listed above. Upon successful completion, students received, in addition to the doctoral degree in their home department, the notation “Completed Collaborative Program in Jewish Studies.”

Degree Programs Offered

Anthropology – PhD
English – PhD
Art (History of Art) – PhD
German Language and Literature – PhD
History – PhD
Near and Middle Eastern Civilizations – PhD
Philosophy – PhD
Political Science – PhD
Religion – PhD
Slavic Languages and Literatures – PhD
Sociology – PhD

Contact and Address
Web: www.utoronto.ca/jewish
E-mail: jewish.studies@utoronto.ca
Telephone: (416) 978-8118
Fax: (416) 946-7719

Collaborative Program in Jewish Studies
University College
Room 316, 15 King’s College Circle
Toronto, Ontario M5S 3H7
Canada
Collaborative Programs

Germanic Languages and Literatures
GER 1530H Heine and Critical Theory

History
HIS 1267H Nationalism
HIS 1274H The Nazis, Occupied Europe, and the Jews
HIS 1276H The Third Reich and the Holocaust
HIS 1277H Topics in Jewish History
HIS 1279H World War II in East Central Europe
HIS 1287H Polish Jews Since the Partitions of Poland

Medieval Studies
MST 3210H Medieval Spain
MST 3225H Jews and Christians in Medieval and Renaissance Europe

Near and Middle Eastern Civilizations
NMC 1100Y Introduction to Aramaic
NMC 1101Y Early Syriac Texts
NMC 1102Y Palestinian Aramaic Texts
NMC 1104Y Aramaic Epigraphy
NMC 1105Y Syriac Historical Texts
NMC 1106Y Syriac Exegetical Texts
NMC 1111Y Babylonian Aramaic
NMC 1300Y Intensive Prerequisite Hebrew
NMC 1304Y Biblical Narrative
NMC 1306H Scribes, Manuscripts, and Translations of the Hebrew Bible
NMC 1308H Prophecy in Ancient Israel
NMC 1309H Wisdom in Ancient Israel
NMC 1311Y Post Biblical Hebrew: Mishnah and Midrashim
NMC 1312H Midrash Before the Rabbis: The Beginnings of Biblical Interpretation
NMC 1313H Mishna and Tosefta
NMC 1316H Modern Hebrew Poetry
NMC 1317H Modern Hebrew Prose
NMC 1318Y Midreshei Halakha
NMC 1324Y Hebrew Legal Codes
NMC 1326Y Topics in Midrashic Literature
NMC 1608Y Life Cycle and Personal Status in Judaism: Reproductive Technology and Jewish Law
NMC 1609Y Gender-related Topics in Law and Religion

Philosophy
Various courses, depending upon their content in a given year. Consult the Collaborative Program Director.
PHL 2084H Seminar in Nineteenth-Century Continental Philosophy
PHL 2089H Seminar in Twentieth-Century Continental Philosophy
PHL 2090H Hermeneutics

Political Science
POL 2021Y Topics in Comparative Jewish and Non-Jewish Political Thought

Religion
RLG 2012Y Natural Law in Judaism and Christianity
RLG 2018H Religion and Bioethics
RLG 3103H Problems in Israelite Religion
RLG 3611H Topics in Rabbinic Midrash
RLG 3641H Interpretations of Jewish Tradition
RLG 3621H Modern Jewish Thought
RLG 3622H Maimonides and his Modern Interpreters
RLG 3623H The Thought of Leo Strauss: Philosophy, Theology and Politics
RLG 3624Y The Jurisprudence of Maimonides
RLG 3634H Worship and Scripture at Qumran
RLG 3641H Interpretations of Jewish Tradition
RLG 3645Y The Jewish Legal Tradition
RLG 3647H Early Rabbinic Judaism
RLG 3661H Judaism and Philosophy
RLG 3692H Themes in Jewish Studies II
RLG 3655H Readings in Jewish Literature

Slavic Languages and Literatures
SLA 1207H The Imaginary Jew

Program Committee
Ivan Kalmar, BA, MA, PhD/Anthropology
Adam Cohen, BA, MA, PhD/Art
Andreas Most, BA, MA, PhD/English
Willi Goetschel, LicPhil, PhD/German
Derek Penslar, BA, MA, PhD/History H. Najman, BA, MA, PhD/Near & Middle Eastern Civilizations
Robert Gibbs, BA, MA, PhD/Philosophy
Jeffrey Kopstein, BA, MA, PhD/Political Science
David Novak, AB, MHL, rabbinical diploma, PhD/Religion
Leonid Livak/Slavic
Michal Bodemann, MA, PhD/Sociology

#Courses are taught by Program faculty and incorporate themes within and outside of Jewish Studies. Major research and writing assignments for such courses must focus on topics in Jewish Studies.
Collaborative Programs

Knowledge Media Design

Degree Programs

Master’s Degrees

Minimum Admission Requirements
- Students wishing to apply to the Collaborative Program must be enrolled, or anticipate being enrolled, in a collaborating degree program in one of the collaborating graduate programs. Applying to the Collaborative Program is a separate procedure. Consult the KMDI Web site for application guidelines. Admission will be subject to the approval of the graduate department concerned and the Program Committee of the Collaborative Program.

Program Requirements
- Students must meet all the requirements of their home department.
- Master’s students must successfully complete KMD 1001H, KMD 1002H, and 1.0 full-course equivalent (FCE). Of the 1.0 FCE, at least 0.5 FCE must be from the KMD 2001-2004 series or, in exceptional circumstances, a designated cognate course. The remaining 0.5 FCE may be from a list of recognized department courses.
- Master’s students are encouraged, but not obligated, to complete a thesis/research project component in their home department, the topic of which should be relevant to the field of knowledge media design.
- Collaborative program courses may count towards the home department degree requirements or may be in addition to the degree requirements, depending on the participating department’s individual program regulations.

Doctor of Philosophy

Minimum Admission Requirements
- Students wishing to apply to the Collaborative Program must be enrolled, or anticipate being enrolled, in a collaborating degree program in one of the collaborating graduate programs. Applying to the Collaborative Program is a separate procedure. Consult the KMDI Web site for application guidelines. Admission will be subject to the approval of the graduate department concerned and the Program Committee of the Collaborative Program.

Program Requirements
- Doctoral students are required to take KMD 1001H and KMD 1002H if not already taken in the master’s program, 0.5 full-course equivalent (FCE) from the KMD 2001-2004 series, or, in exceptional circumstances, a designated cognate course
- The dissertation topic must be in the field of knowledge media design. The thesis advisor and at least one other committee member must be from participating units.

Degree Programs Offered
Architecture – MArch
Computer Science – MSc, PhD
Curriculum, Teaching and Learning – MA, MEd, PhD
Information Studies – MIST, J.D/MIST, PhD
Landscape Architecture – MLA
Mechanical and Industrial Engineering – MASc, MEng, PhD
Medical Science – MSc, PhD
Sociology – MA, PhD
Urban Design – MUD
Visual Studies – MVS

Overview
The Collaborative Program in Knowledge Media Design (KMD) was launched in 2002 as the teaching arm of the Knowledge Media Design Institute (KMDI). The Collaborative Program provides a specialization for graduate students from a variety of academic backgrounds to engage in the design, prototyping, evaluation, and use of knowledge media. In keeping with KMDI’s human-centred approach, students explore the design and use of new media in the context of real world practices of individuals and communities. Access to an intensely collaborative and cross-disciplinary faculty encourages students to take a broader view of technological and social change and to be constructively critical of technological utopian and dystopian visions alike. The goal is for students to take into account heritage and history, to understand the realities of today, and to design for tomorrow.

Students have access to a community of scholars and the network of relationships that the Institute coordinates. They gain first-hand experience of a living network of innovation, an environment in which the resources are people and knowledge and the social capital and value that are generated through collaboration.

The Collaborative Program is open to master’s and PhD students in the collaborating graduate programs listed above.

Contact and Address
Web: kmdi.utoronto.ca/graduate
E-mail: program@kmdi.utoronto.ca
Telephone: (416) 946-8515
Fax: (416) 978-5634

Collaborative Program in Knowledge Media Design
Knowledge Media Design Institute
Bahen Building, University of Toronto
7th Floor, 40 St. George Street
Toronto, Ontario M5S 2E4
Canada
• The home graduate unit and the student's supervis-
ing committee will determine further requirements. The collaborating units cooperate in jointly develop-
ing a program that is individually tailored to meet the needs of each student.

Courses
For courses offered in a particular year, check the Collaborative Program Web site: kmdi.utoronto.ca/graduate

Knowledge Media Design

Required
KMD 1001H Core Seminar in Knowledge Media Design I—Fundamental Concepts
KMD 1002H Core Seminar in Knowledge Media Design II—Contexts and Practices

Electives
KMD 2001H Human-centred Design
KMD 2002H Technologies for Knowledge Media
KMD 2003H Knowledge Media and Learning
KMD 2004H Knowledge Media, Culture and Society

Participating Department Electives
Existing courses from the participating departments that satisfy KMD requirements are listed below. These courses may not be offered every year. Courses that are mandatory for a student's degree from the home department cannot normally be counted. Some of the elective courses may require a significant amount of background knowledge and experience. Enrolment in such courses may require the permission of the instructor.

ARC 1033H Architecture, Media and Communications
C&T 1004H Communications: History/Theory/Technology
C&T 1005H Understanding McLuhan
C&T 1009H New Media and Policy
CSC 2103H Software Engineering
CSC 2105H Requirements Engineering
CSC 2501H Computational Linguistics
CSC 2502H Knowledge Representation and Reasoning
CSC 2504H Computer Graphics
CSC 2507H Conceptual Modelling
CSC 2509H Data Management Systems
CSC 2511H Natural Language Computing
CSC 2514H Human-Computer Interaction
CSC 2516H Spoken Language Processing
CSC 2524H Topics in Interactive Computing
CSC 2527H The Business of Software
CSC 2536H Computer Supported Cooperative Work
CSC 2537H Hypermedia
CTL 1022H Introduction to Computers in Education
CTL 1603H Introduction to Knowledge Building
CTL 1608H Constructive Learning and Design of Online Environments
CTL 1923H Technology Supported in Situ Learning
FAH 1478H Art and Animation
FIS 1210H Information and its Social Contexts
FIS 1230H Management of Information Organizations
FIS 1340H Introduction to Information Systems
FIS 1341H Analyzing Information Systems
FIS 1342H Designing Information Systems
FIS 1343H Introduction to Database Management and Design
FIS 2149H Administrative Decision-Making in Information Organizations
FIS 2150H Advanced Management of Information Organizations
FIS 2165H Social Issues in Information and Communication Technologies
FIS 2169H User-Centred Information Systems Development
FIS 2179H Interacting with Information Systems
FIS 2183H Knowledge Management and Systems
JAC 1001H Media, Mind and Society I
MIE 1402H Experimental Methods in Human Factors Research
MIE 1403H Analytical Methods in Human Factors Research
MIE 1407H Engineering Psychology and Human Performance
MIE 1502H Information Technology and Systems: Management Strategies
MIE 1504H Management of Technological Change
MSL 2325H Museums and New Media Practice
SOC 6008H Network Analysis I
SOC 6108H Network Analysis II
SOC 6303H Field Methods
SOC 6312H Social Aspects of Technology and Work
SOC 6501H Research Design and Hypothesis Testing in Sociology
VIS 1010H Contemporary Art Since 1960
VIS 1020H Contemporary Art: Theory and Criticism
VIS 2002H MVS Contemporary Art Issues

Program Committee
John Danahy - BLA, C UrbDes, MSc Urb&DesPl - Architecture, Landscape, & Design
Gerald Penn - BSc, MSc, PhD - Computer Science
James Slotta - MA, PhD - Curriculum Teaching & Learning (Program Director)
Nadia Caidi - BA, MA, MLS, PhD - Information Studies
Andrew Clement - BSc, MSc, PhD - Information Studies
Mark Chignell - BSc, MSc, PhD - Mechanical & Industrial Engineering
Barbara Soren - BPHE, BEd, MSc(T), PhD - Museum Studies (Graduate Administrator)
Zaheer Baber - BSc, MA, MPHil, PhD - Sociology
Lisa Steele - RCA, honorary PhD OCAD - Visual Studies History of Art

Knowledge Media Design 463
Collaborative Programs

Management and Economics

Lead Faculty
Arts and Science

Degree Programs Offered
Economics – PhD
Management – PhD

Overview
The Rotman School of Management and the Department of Economics offer a limited enrolment collaborative program in Management and Economics. The student will undertake a program of study that includes:
- developing a basic understanding in one of the core areas of management (accounting, economics, finance, marketing, operations management, organizational behaviour);
- developing an in-depth understanding of economics and econometrics (PhD-level work);
- and carrying out PhD-level work in one of the areas of management.

At present, only finance is available in the collaborative program.

Contact and Address
Web: www.economics.utoronto.ca
E-mail: ecograd@chass.utoronto.ca
Telephone: (416) 978-7169
Fax: (416) 978-6713

Department of Economics
Room 4072, Sidney Smith Hall
University of Toronto
Toronto, Ontario M5S 3G3
Canada

Degree Programs

Doctor of Philosophy

Minimum Admission Requirements
- Admission to the program is by permission of the graduate coordinators in both Economics and Management. Prospective applicants should apply to the Department of Economics, and must meet the admission requirements of the Department of Economics.
- Admission requirements (at a minimum) are the same as for the PhD program in Economics. Students should have a strong undergraduate and MA-level background in economic theory, as well as mathematics.
- Preference is given to students with undergraduate or other previous course work in commerce or business, especially finance and accounting.

Program Requirements
- The PhD is a full-time program. Applicants must be registered as full-time students for a minimum period of three years.
- The PhD is a research degree which requires:
  - demonstration of competence in core economics, in finance, and a second special field in economics;
  - fulfilment of a breadth/distribution requirement in management and finance;
  - a thesis based on original research.
- To fulfill the program requirements outlined below, students will complete all of their comprehensive exams in two years, and their required course work in 2.5 years.
  - **Year 1** - Students must take the Math-Stat Review (ECO 1011H), the PhD microeconomic theory sequence (ECO 2020H and ECO 2030H), the PhD econometrics sequence (ECO 2400H and ECO 2401H), and the first two courses of the Rotman Finance sequence (MGT 3030H and MGT 3031H). They must also complete (or be exempt from) Financial Accounting (MGT 1221H or MGT 1222H), and Business Finance by the end of Year 1. Students can satisfy the Business Finance requirement by taking ECO 2503H. Students must pass the microeconomic theory comprehensive exam by the end of Year 1.
  - **Year 2** - Students complete the PhD sequence in macroeconomics (ECO 2021H and ECO 2031H), and satisfy their main field requirement by completing the PhD Finance sequence (MGT 3032H, MGT 3033H, and MGT 3034H). Students must pass the comprehensive exam in macro, as well as the Rotman Finance comprehensive exam. Students satisfy the distributional requirement in economics by taking two courses from a list approved by the Department of Economics. This comprises the minor field; note that the Financial Economics field is excluded from this list. Students should also attend the Finance seminar on a regular basis, beginning in Year 2.
  - **Year 3** - Students complete their management distributional requirement by taking two courses in a stream approved by the Rotman School of Management, drawn from the second-year MBA courses (i.e., MGT 2300 series). Students must participate in the Graduate Research Seminar (ECO 4060Y), and present a “second year” paper proposal by February of Year 3. The completed “second year” paper must be presented in the Finance Seminar by the Fall of Year 4.
  - **Years 4 and 5** - Students complete their dissertation.
Courses
See the separate entries in this calendar for the Economics and Management PhD programs.

Program Committee
Adonis Yatchew - BA, MA, PhD - Economics
Peter Pauly - MA, PhD - Management
Collaborative Programs

Neuroscience

Lead Faculty
Medicine

Degree Programs Offered
Biochemistry – MSc, PhD
Biomedical Engineering – MSc, PhD
Cell and Systems Biology – MSc, PhD
Dentistry – MSc, PhD
Human Development and Applied Psychology – MA, PhD
Laboratory Medicine and Pathobiology – MSc, PhD
Medical Biophysics – MSc, PhD
Medical Science – MSc, PhD
Molecular Genetics – MSc, PhD
Pharmacology and Toxicology – MSc, PhD
Pharmaceutical Sciences – MSc, PhD
Physiology – MSc, PhD
Psychology – MA, PhD
Rehabilitation Science – MSc, PhD
Speech-Language Pathology – MSc, PhD

Overview
The graduate programs listed above participate in the Collaborative Program in Neuroscience. Participating graduate units contribute courses and provide facilities and supervision for graduate research. Students must follow a program of studies acceptable to both the participating unit and the Neuroscience Program. Upon successful completion of the requirements, students receive, in addition to the master's or PhD degree in their discipline, the notation “Completed Collaborative Program in Neuroscience” on their transcripts as well as a certificate.

Students interested in joining the program should contact the Program in Neuroscience office to obtain an application form. Students should register within one month of initial registration in the participating unit. The Neuroscience Web site provides summaries of research fields of all the faculty in the Collaborative Program and their graduate unit affiliations and addresses, as well as additional information on neuroscience courses.

Students in the program receive the Program in Neuroscience newsletter and a monthly calendar listing neuroscience lectures held on campus. The program runs a Distinguished Lecturer series of talks by eminent neuroscientists and an annual poster day which students are required to attend. The students in the program also organize various social events during the year.

Contact and Address
Web: www.utoronto.ca/neurosci
E-mail: p.neuroscience@utoronto.ca
Telephone: (416) 978-4894
Fax: (416) 978-1878

Degree Programs

Master’s Degrees

Minimum Admission Requirements
• Applicants who wish to enrol in the Collaborative Program must apply to and be admitted to both the Collaborative Program and a graduate degree program in one of the collaborating units.

Program Requirements
• The thesis topic must be in the neuroscience area.
• The student’s supervisor must be a member of the Program in Neuroscience (PIN).
• The student must have an adequate background in general neuroscience.
• The student must complete at least 0.5 full-course equivalent (FCE) for the master’s degree chosen from the list of courses approved by the Program in Neuroscience which is listed below.
• The student must attend the Annual PIN Poster Day and present his/her work at least once.
• The student must attend at least 75% of the lectures in the PIN Distinguished Lecturers Series.

Doctor of Philosophy

Minimum Admission Requirements
• Applicants who wish to enrol in the Collaborative Program must apply to and be admitted to both the Collaborative Program and a graduate degree program in one of the collaborating units.

Program Requirements
• The thesis topic must be in the neuroscience area.
• The student’s supervisor must be a member of the Program in Neuroscience (PIN).
• The student must have an adequate background in general neuroscience.
• The student must complete at least 1.0 full-course equivalent (FCE) for the PhD degree chosen from the list of courses approved by the Program in Neuroscience which is listed below.
• The student must attend the Annual PIN Poster Day and present his/her work at least once.
• The student must attend at least 75% of the lectures in the PIN Distinguished Lecturers Series.
• After completing the MSc or MA, students who wish to continue on to a PhD degree in Neuroscience
must register again and fulfil all the program requirements (e.g., students must again present a poster in the doctoral program).

Courses

Neuroscience courses offered by the participating units are listed below. Not all courses are offered each year.

DEN 1060H Oral Physiology: Sensory and Neuromuscular Function
HDP 3286H Developmental Neurobiology
JNR 1444Y Fundamentals of Neuroscience: Cellular and Molecular
JNS 1000Y Fundamentals of Neuroscience: Systems and Behaviour
JPM 1005Y Behavioural Pharmacology
JPY 1007Y Neuropharmacology of Neuronal Transmitter Receptors
JYG 1555H Topics in Cellular and Molecular Neurobiology
LMP 1003Y Seminar on Diseases of the Central Nervous System
MSC 1006H Advanced Neuroanatomy
MSC 1085H Molecular Approaches to Mental Health and Addictions
MSC 6000H Special Topics in Anatomy (Requires prior permission of the Neuroscience Program Director)
PCL 1012H Cognitive Neuropsychopharmacology
PSL 1024H Advanced Topics: Endocrinology and Neuroendocrinology
PSL 1026H Advanced Topics: Experimental Cell Physiology
PSL 1047H Advanced Topics: Somatosensory and Pain Neuroscience
PSL 1053H Advanced Topics: Critical Assessment of Ion Channel Function
PSL 1068H Advanced Topics: Molecular Basis of Behaviour
PSY 5101H Mechanisms of Behaviour
PSY 5103H Learning and Plasticity
PSY 5104H Neuropsychology
PSY 5110H Advanced Topics in Behavioural Neuroscience I
PSY 5111H Advanced Topics in Behavioural Neuroscience II
PSY 5112H Advanced Topics in Behavioural Neuroscience III
PSY 5121H Advanced Topics in Animal Behaviour and Motivation II
PSY 5130H Advanced Topics in Neuropsychology I
PSY 5131H Advanced Topics in Neuropsychology II
PSY 5132H Advanced Topics in Neuropsychology III
PSY 5201H Audition
PSY 5202H Vision
PSY 5203H Higher Cognition
PSY 5204H Attention
PSY 5205H Memory
PSY 5210H Advanced Topics in Perception I
PSY 5211H Advanced Topics in Perception II

Other Courses

Courses not specifically in neuroscience which do not fulfil the program requirements as neuroscience courses but might be useful for neuroscience students.

JBL 1507H Biochemistry of Inherited Disease
JDB 1025Y Developmental Biology
JNP 1017H+ The Molecular and Biochemical Basis of Toxicology
JNP 1018H+ Current Topics in Molecular and Biochemical Toxicology
PHM 1122H Fundamentals of Drug Discovery
PSL 1054H Physiological Instrumentation and Electronics
PSL 1472H Sleep Physiology and Chronobiology
PSY 5102H Motivational Processes
SLP 1522Y Speech Physiology and Acoustics
SLP 1533Y Aphasia
SLP 1534Y Motor Speech Disorders
SLP 3001H Theoretical Foundations of Communication Sciences

Program Committee

William Trimble, BSc, PhD, Canada Research Chair - Biochemistry
Molly Shoichet, BSc, MSc, PhD, Canada Research Chair - Biomedical Engineering
Barry Sessle, BDS, BSc, MSD, PhD, FRSC, Canada Research Chair - Dentistry
Marc Lewis, BA, MA, PhD, CPsych - Human Development & Applied Psychology
Sukriti Nag, MBBS, MD, MSc, PhD, FRCP(C) - Laboratory Medicine & Pathobiology
Peter Carlen, MA, MSc, PhD - Medical Science
John Roder, BA, PhD, Canada Research Chair - Molecular & Medical Genetics
James Wells, BScPhm, MSc, PhD - Pharmaceutical Sciences
Willets Burnham, BA, PhD - Pharmacology
Jonathan Dostrovsky, BSc, MSc, PhD - Physiology
Zhengping Jia, PhD - Physiology
John Yeeoms, BA, PhD - Psychology
William McIntyre, BSc, MSc, PhD - Rehabilitation Science
Luc De Nil, MSc, PhD - Speech-Language Pathology
John Peever, BSc, MSc, PhD - Cell & System Biology

*Extended course. For academic reasons, course work is extended into session following academic session in which course is offered.
Optics

Degree Programs

Master's Degrees

Admission Requirements
• Admission to a MSc or MASc degree program in one of the four collaborating units.
• Commitment to make optics or photonics the main focus of study in that program, as stated in the application form for the Collaborative Program.

Program Requirements
• Meet all respective degree requirements of the School of Graduate Studies and the home department.
• Successful completion of the Collaborative Program core course IOS1500H.
• If a thesis is required by the home graduate unit, its topic must fall in the broad area of optics. A member of the collaborative program's faculty must be part of the examination committee.

Courses
IOS 1500H Selected Topics in Optics

See also full course listings in the Departments of Electrical and Computer Engineering; Physics; Chemistry; and Materials Science and Engineering.

Program Committee
R J Dwayne Miller - BSc, PhD, FRSC, Canada Research Chair - Chemistry, Physics (Program Director)
Gilbert Walker - BA, PhD - Chemistry
Amr Helmy - BSc, MSc, PhD - Electrical & Computer Engineering
Zheng-Hong Lu - BSc, MSc, PhD - Materials Science & Engineering
John Sipe - BSc, MSc, PhD - Physics

Contact and Address
Web: www.optics.utoronto.ca
E-mail: eistrate@optics.utoronto.ca
Telephone: (416) 978-1804
Fax: (416) 978-3936

Institute for Optical Sciences
Suite 331, 60 St. George Street
Toronto, Ontario M5S 1A7
Canada
Sexual Diversity Studies

Lead Faculty
Arts and Science

Degree Programs Offered
Anthropology – MA, MSc, PhD
Classics – MA, PhD
Criminology – MA, JD/MA, PhD
Drama – MA, PhD
East Asian Studies – MA, PhD
English – MA, PhD
Exercise Sciences – MSc, PhD
History – MA, PhD
History of Art – MA, PhD
Information Studies – MIST, PhD
Law – LLM, MSL, SJJD
Linguistics – MA, PhD
Medieval Studies – MA, PhD
Museum Studies – MMSt
Philosophy – MA, PhD
Political Science – MA, PhD
Psychology – MA, PhD
Public Policy – MPP
Religion – MA, PhD
Sociology – MA, PhD
Sociology and Equity Studies in Education – MA, MEd, EdD, PhD
Visual Studies – MVS
Women and Gender Studies – MA

Overview
The Collaborative Program in Sexual Diversity Studies, offered by the Mark S. Bonham Centre for Sexual Diversity Studies, is a rigorously interdisciplinary program recognizing sexual diversity studies as an interdisciplinary field of inquiry. While it has emerged as an autonomous scholarly area, many of those who work within it engage questions of gender, ethnicity, race, Aboriginal status, (dis)ability, and class, to highlight the importance of exploring their interaction with sexual differences.

The graduate degree programs listed above participate in the Collaborative Program. From their home departments, students may take up questions from their own disciplinary or programmatic perspective, but explore it through the theoretical and methodological lens of sexuality studies.

Contact and Address
Web: www.utoronto.ca/sexualdiversity
E-mail: sexual.diversity@utoronto.ca
Telephone: (416) 978-6276 (for general inquiries)
Fax: (416) 971-2027

Degree Programs

Master's Degrees

Minimum Admission Requirements
Each graduate student in the Program shall be enrolled in a participating degree program in the graduate unit where the research is conducted, which is known as the home graduate unit. The student shall meet the admission requirements of both the home graduate unit and the Collaborative Program.

Program Requirements
The student shall meet the admission requirements of both the home graduate unit and the Collaborative Program as follows:

- 0.5 full-course equivalent (FCE) core course in Sexual Diversity Studies (SDS 1000H)
- 0.5 FCE in other courses with substantial treatment of sexual diversity
- thesis or major research paper (if applicable) must be on a sexual diversity studies topic

All course selection for the additional 0.5 FCE must be approved by the director of the Collaborative Program.

Doctoral Degrees

Minimum Admission Requirements
Each graduate student in the Program shall be enrolled in a participating degree program in the graduate unit where the research is conducted, which is known as the home graduate unit. The student shall meet the admission requirements of both the home graduate unit and the Collaborative Program.

Program Requirements
Students must meet all respective degree requirements of the School of Graduate Studies and the participating graduate unit; and meet the requirements of the Collaborative Program as follows:

- 0.5 FCE core course in Sexual Diversity Studies (SDS 1000H)
Collaborative Programs

- 0.5 FCE in other courses with substantial treatment of sexual diversity
- Thesis or major research paper (if applicable) must be on a sexual diversity studies topic.
- Doctoral students in the program who have completed the Collaborative Program at the master’s level will not be required to repeat SDS 1000H. All course selection for the additional 0.5 FCE must be approved by the director of the Collaborative Program.
- The doctoral thesis committee should include at least one faculty member associated with SDS. In most cases, the supervisor would be associated with SDS, though in some cases, the student’s particular analytical perspective will suggest another faculty member in her or his discipline.
- The student’s course of study and overall progress will be reviewed annually by the Collaborative Program director, though ultimate responsibility for the student’s progress will remain with the graduate chair of the home program.

Courses
- SDS 1000H Theoretical and Methodological Issues in Sexual Diversity Studies
- SDS 1999H Special Topics in Sexual Diversity Studies

Program Executive Committee
The full Graduate Committee includes one representative of each partner program. That Committee has approved the creation of a Graduate Program Executive Committee, composed as follows:

David Rayside - BA, AM, PhD - Political Science
Stephen Johnson - BA, MA, PhD - Drama
Mariana Valverde - BA, MA, PhD, FRSC - Criminology
Marjut Ruti - BA, MA, PhD - English
Brenda Cossman - BA, LLB, LLM - Law
Rinaldo Walcott - BA, MA, PhD - Sociology & Equity Studies in Education
Ashwini Tambe - BA, MS, PhD - Women & Gender Studies, History

Two graduate students (committee members for other than admission decisions)
South Asian Studies

Lead Faculty
Arts and Science

Degree Programs Offered
Anthropology – MA, PhD
English – MA, PhD
Geography – MA, PhD
History – MA, PhD
Music – MA, PhD
Political Science – PhD
Religion – MA, PhD
Social Work – MSW, PhD
Sociology and Equity Studies in Education – MA, MEd, EdD, PhD
Women and Gender Studies – MA

Overview
The interdisciplinary Collaborative Master’s and Doctoral Program in South Asian Studies is designed for students who wish to acquire a nuanced understanding of South Asia as a secondary area of specialization while pursuing graduate studies in another discipline. The focus of this program is necessarily broad in that it provides students with an understanding of ancient and modern history, social change, economic development, contemporary politics, religious traditions, literary culture, and a spectrum of related topics.

The Centre for South Asian Studies, which administers the Collaborative Program, provides a nucleus for the participation of South Asian Studies scholars from across the University. Students will benefit from the physical presence of the Centre and its regular activities of research fora, conferences, and visiting lecturer and scholar programs. In addition, the University’s library collection in South Asian studies is the largest in Canada.

Master’s and doctoral students wishing to be admitted to the Collaborative Program must apply to one of the participating graduate programs.

Students who successfully complete the requirements of the Collaborative Program will receive the notation “Completed Collaborative Program in South Asian Studies” on their transcript, in addition to the master’s or doctoral degree from their graduate unit.

Contact and Address
Web: www.sgs.utoronto.ca/sas/
E-mail: southasian.grad@utoronto.ca
Telephone: 416-946-8996
Fax: 416-946-8838

Collaborative Program in South Asian Studies
Centre for South Asian Studies
Munk Centre for International Studies
University of Toronto
Room 228N, 1 Devonshire Place
Toronto, Ontario M5S 3K7
Canada

Degree Programs

Master’s Degrees

Minimum Admission Requirements
- Applicants who wish to enrol in the Collaborative Program must apply to and be admitted to both the Collaborative Program and a graduate degree program in one of the collaborating departments. Applicants must meet the admission requirements of the graduate unit in which they intend to enrol. Admission will be subject to the approval of the graduate unit concerned and the Program Committee of the Collaborative Program.

Program Requirements
- A mandatory half-year core course entitled Issues in South Asian Studies taught by the core faculty. The core course will be the same for both master’s and doctoral students. Master’s students who proceed to the doctoral program will not be required to take the core course again. With the permission of the home graduate unit, the core course can be taken in lieu of one of the courses required by the home unit.
- Attendance at the visiting lecture series organized by the Centre for South Asian Studies during the academic year in which the student takes the core course.
- A written thesis; it is expected that the dissertation will include a significant South Asian component.
- For master’s students writing a research paper, the home unit will determine whether a South Asian component is required in the research paper.
- For master’s students writing a thesis and master’s students writing a research paper, language requirements will be assessed on a case-by-case basis.
Collaborative Programs

Doctor of Philosophy

Minimum Admission Requirements
- Applicants who wish to enrol in the Collaborative Program must apply to and be admitted to both the Collaborative Program and a graduate degree program in one of the collaborating departments. Applicants must meet the admission requirements of the graduate unit in which they intend to enrol. Admission will be subject to the approval of the graduate unit concerned and the Program Committee of the Collaborative Program.

Program Requirements
- A mandatory half-year core course entitled Issues in South Asian Studies taught by the core faculty (unless already taken in the master's program). With the permission of the home graduate unit, the core course can be taken in lieu of one of the courses required by the home unit.
- Attendance at the visiting lecture series organized by the Centre for South Asian Studies for a total of two years, including the academic year in which the student takes the core course.
- The dissertation to include a significant South Asian component.
- A research presentation to the Program Committee on a South Asian topic in Year 3 or Year 4 of the program.
- Language requirement, depending on the student's area of specialization.

Core Course
SAS 2004H S Issues in South Asian Studies

Program Committee
Prakruti Dave - BA, MA, PhD - Anthropology
Heather Miller - BA, MSc, MA, PhD - Anthropology
Chelvanayakam Kanaganayakam - BA, PhD - English
Kanishka Goonewardena - BSc, MPhil, PhD - Geography
Katharine Rankin - BA, MRP, PhD - Geography
Ritu Birla - BA, MA, MPhil, PhD - History
Malavika Kasturi - BA, MPhil, MA, PhD - History
Ashwini Tambe - BA, MA, PhD - History, Women and Gender Studies
Arthur Rubinoff - BA, MA, PhD - Political Science
Arti Dhand - BA, MA, PhD - Religion
C. T. McIntire - BA, MA, MDiv, PhD - Religion
Ajay Rao - BA, MA, PhD - Religion
Zaheer Baber - BA, MA, PhD - Sociology
Women and Gender Studies

Degree Programs Offered
Adult Education and Community Development – MA, MEd, EdD, PhD
Anthropology – MA, MSc, PhD
Classics – MA, PhD
Clinical Epidemiology and Health Care Research – MSc
Comparative Literature – MA, PhD
Counselling Psychology – MA, MEd, EdD, PhD
Criminology – MA, PhD
Curriculum Studies and Teacher Development – MA, MEd, EdD, PhD
Drama – MA, PhD
Educational Administration – MA, MEd, EdD, PhD
English – MA, PhD
Exercise Sciences – MSc, PhD
Foreign Language and Literature – MA, PhD
Geography – MA, PhD
Germanic Literature, Culture and Theory – MA, PhD
Health Administration – MHS, MSc, PhD
Higher Education – MA, MEd, EdD, PhD
History – MA, PhD
History and Philosophy of Education – MA, MEd, EdD, PhD
Information Studies – MIST, PhD
Law – LLM, SJD
Medieval Studies – MA, PhD
Near and Middle Eastern Civilizations – MA, PhD
Nursing Sciences – MN, PhD
Philosophy – MA, PhD
Political Science – MA, PhD
Public Health Sciences – MHS, MSc, PhD
Religion – MA, PhD
Second Language Education – MA, MEd, PhD
Social Work – MSW, PhD
Sociology – MA, PhD
Sociology and Equity Studies – MA, MEd, EdD, PhD
Spanish – MA, PhD

Overview
The Graduate Collaborative Program in Women and Gender Studies (CWGS) provides a formal educational context for the pursuit of interdisciplinary research in women and gender studies and advanced feminist scholarship. The program, offered at the master's and doctoral levels, provides a central coordinating structure to facilitate and disseminate research in women and gender studies through student and faculty research seminars, colloquia, circulation of work in progress, study groups, conferences, and publications. The CWGS contributes to the development of an integrated research community in women and gender studies at the University of Toronto.

The graduate programs listed above participate in the Collaborative Program in Women and Gender Studies at the University of Toronto. The collaborating units contribute courses and provide facilities and supervision for graduate research. The program is administered by the Women and Gender Studies Institute (WGSI). The CWGS brings together 33 graduate programs providing more than 100 courses and involving over 100 graduate faculty members.

Students who successfully complete the requirements of the collaborative program will receive the notation “Completed Collaborative Program in Women and Gender Studies” on their transcript, in addition to the master's or doctoral degree from their home graduate unit.

Contact and Address
Web: www.utoronto.ca/wgsi
E-mail: grad.womenstudies@utoronto.ca
Telephone: (416) 978-3668
Fax: (416) 946-5561

Graduate Collaborative Program in Women and Gender Studies
Women and Gender Studies Institute
Room 2036, Wilson Hall, New College
University of Toronto
Toronto, Ontario M5S 1C6
Canada

Degree Programs
Master's Degrees

Minimum Admission Requirements
• Applicants who wish to enrol in the collaborative program must apply to and be admitted to both the collaborative program and a graduate degree program in one of the collaborating departments. Students must fulfil all the degree requirements in the home department.
• Normally, applicants to the master's program (thesis and non-thesis) should have at least 1.0 full-course equivalent (FCE), and preferably more, in women's studies, feminist studies and/or gender studies. This 1.0 FCE may be in women's studies/gender studies or it may be a course on gender and women in another discipline. In exceptional cases, extensive work or activist experience which also requires academic knowledge of research on women and/or gender will also be considered.
• Two-page statement of research intent explaining how your program of study and specific research interests relate to women and gender studies at the master's level.
• Two letters of reference outlining your background in women and gender studies.
Program Requirements

• Programs of study should be planned in consultation with the CWGS Graduate Coordinator as well as the Coordinator of Graduate Studies in the student's home graduate unit.

• Courses should be selected from the established cross-listed courses approved by the Graduate Coordinator of the collaborative program.

Non-Thesis Master's

• JPW 2118H Philosophical Foundations of Women's Studies or equivalent.

• 1.0 full-course equivalent (FCE) selected from the cross-listed courses in CWGS.

Thesis Master's

• JPW 2118H Philosophical Foundations of Women's Studies or equivalent.

• 0.5 full-course equivalent (FCE) selected from the cross-listed courses in CWGS.

• The thesis, or major paper, dealing with a subject in the field of women and gender studies.

• Theses will be supervised and evaluated in the same manner as those in the home graduate unit. Normally, at least one graduate faculty member cross-listed with CWGS will be a member of the thesis or supervisory committee of students in the program.

Doctor of Philosophy

Minimum Admission Requirements

• Applicants who wish to enrol in the collaborative program must apply to and be admitted to both the collaborative program and a graduate degree program in one of the collaborating departments. Students must fulfill all the degree requirements in the home department.

• Familiarity with the approaches and methodologies associated with scholarship in women and gender studies, or extensive familiarity with women and gender studies scholarship in a single discipline or a cognate set of disciplines.

• Normally, applicants to the PhD program should have at least 1.0 full-course equivalent (FCE), and preferably more, in women's studies, feminist studies and/or gender studies. This 1.0 FCE may be in women's studies/gender studies or it may be a course on gender and women in another discipline. In exceptional cases, extensive work or activist experience which also requires academic knowledge of research on women and/or gender will also be considered.

• Two-page statement of research intent explaining how your program of study and specific research interests relate to women and gender studies at the doctoral level.

• Two letters of reference outlining your background in women and gender studies.

Program Requirements

• Programs of study should be planned in consultation with the CWGS Graduate Coordinator as well as the Coordinator of Graduate Studies in the student's home graduate unit.

• Courses should be selected from the established cross-listed courses approved by the Graduate Coordinator of the collaborative program.

• Doctoral thesis dealing with a subject in the field of women and gender studies. Theses will be supervised and evaluated in the same manner as those in the home graduate unit. Normally, at least one graduate faculty member cross-listed with CWGS will be a member of the thesis or supervisory committee of students in the program.

• JPW 2118H Philosophical Foundations of Women's Studies or equivalent (if not already completed).

• WGS 3000H Advanced Research Seminar in Women's Studies.

• 0.5 full-course equivalent (FCE) not taken previously from the list of cross-listed courses in CWGS.

Courses

Required Courses

JPW 2118H Philosophical Foundations of Women's Studies

WGS 3000H Advanced Research Seminar in Women's Studies

Cross-listed Courses

Courses in women and gender studies offered by the participating units are listed below. Not all courses are offered each year. Courses not included in this list may be petitioned for credit. Information and timetables are available from the individual graduate units.

Adult Education and Counselling Psychology

AEC 1104H Community Education and Organizing

AEC 1113H Gender and Hierarchy at Work

AEC 1143H Introduction to Feminist Perspectives on Society and Education

AEC 1146H Women, War and Learning

AEC 1156H Power and Difference in the Workplace

AEC 1207H Counselling Topics in Sexual Orientation and Gender Identity Diversity

AEC 1253H Feminist Issues in Counselling Psychology and Psychotherapy

AEC 1408H Working with Survivors of Trauma

AEC 3119H Global Perspectives on Feminist Education, Community Development, and Community Transformation

AEC 3132H Special Topics in Women in Development and Community Transformation

AEC 3181H Feminist Standpoints: Critical and Post-Structural Approaches
Anthropology
Student must complete “Individual Reading and Research Course Form” before enrolling (available from department).

ANT 5146H Colonial and Postcolonial Discourses
ANT 6026H Anthropology of Identity and Subject Formation
ANT 6050H Reading Course in Specific Area and Theory I
ANT 6051H Reading Course in Specific Area and Theory II
ANT 6052Y Reading Course in Specific Area and Theory III
ANT 7001H Medical Anthropology I
ANT 7002H Medical Anthropology II
JAL 1155H Language and Gender

Classics
CLA 5000H Early Greek Epic
CLA 5023H Topics in the Study of Roman Literature and Culture
CLA 5024H Topics in the Study of Roman Society

Comparative Literature
COL 5021H The Body in Medieval Literature
COL 5025Y Feminism and Postmodernism: Theory and Practice
COL 5032H Feminist Approaches to Medieval Literature
COL 5050Y Social Constructions and Artistic Images of Women in Modern Chinese Literature, Drama, and the Movies
COL 5068H Traditions and Innovations of Epic Theatre from an Intercultural and Feminist Perspective

Criminology
CRI 1020H Law and Society: Theoretical Perspectives
CRI 1050H Theories of Crime and Social Order

Curriculum, Teaching and Learning
CTL 1012H Curriculum for Girls and Young Women: Historical and Contemporary Issues
CTL 1309H Les stéréotypes sexuels dans les programmes scolaires
CTL 1313H Gender Equity in the Classroom

Drama
DRA 1002H History of the Theatre II: Modernity and Modernism in North American Theatre
DRA 3120H “Something More than a Woman”: The Way of the Actress
DRA 1051H Postcolonial Drama
DRA 1055H Performance Research: Sexual Performance (Studies S/M)
DRA 3211H The Performing Body
DRA 4057H Women Script History

English
ENG 1027H Constructions of the Other in Medieval Literature

Exercise Sciences
EXS 5507H Desire and Bodies in Place
EXS 5511H Hormonal Aspects of Women’s Health and Exercise: A Focus on Reproductive and Bone Health Issues
EXS 5519H Theories of the Body and Transcendence

French Language and Literature
FRE 2035H Autour de l’intime en France: les écrits contemporains des femmes
FRE 2036H Configurations du genre sexuel dans la prose contemporaine des femmes
FRE 2078H Alterite: formes et significations

Geography
GGR 1504H Health, Place and Difference
GGR 1801H Social Identities and Space
JPG 1505H The Multicultural City: Diversity, Policy and Planning
JPG 1506H State/Space/Difference: Understanding the New Social Geography of the State
JPG 1509H Feminism, Postcoloniality and Development
JPG 1805H Transnationalism, Diaspora and Gender
JPG 1810H Globalization and Postmodernism
JPG 1815H Political Economy, the Body, and Health

Germanic Languages and Literatures
GER 1772H The Politics of the Non-Fiction Film

Health Policy, Management and Evaluation
JNH 5001H Health Care Settings, Site and Human Well Being

History
HIS 1004H History and Biopolitics
HIS 1016H Readings in the History of Gender and Sexuality
HIS 1026H Modernity and Its Others: History and Postcolonial (joint graduate/undergraduate)
HIS 1101H Race and Gender in the Northern Colonies of North America
HIS 1112H Canada in Comparative Contexts, Gender, Labour, Migration
HIS 1230H The Sexes in the Western World
HIS 1245H Gender, Men, and Women in Europe 1500-1900
HIS 1533H Gender and International Relations (joint graduate/undergraduate)
HIS 1555H Gender and Slavery in the Atlantic World, Seventeenth to Nineteenth Century

Women and Gender Studies
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<tr>
<th>Collaborative Programs</th>
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<tr>
<td>HIS 1663H Gender in East and Southeast Asia</td>
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<td>HIS 1665H Gender and History in Colonial South Asia</td>
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<td>HIS 1667H Transnational Gender Histories</td>
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<td><strong>Information Studies</strong></td>
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<td>FIS 1330H Archives Concepts and Issues</td>
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<td>FIS 2010H Reading Course</td>
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<td>FIS 2011H Reading Course</td>
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<td>FIS 2125H Information and Culture in a Global Context</td>
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<td>FIS 2185H Social Issues in Information and Communication Technologies</td>
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<td>FIS 2174H History of Records and Records-Keeping</td>
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<td><strong>Law</strong></td>
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<td>LAW 294H The Law and Praxis of International Human Rights</td>
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<td>LAW 301H Women’s Rights in International Law</td>
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<td>LAW 334H Feminist Theory; Challenges to Legal and Political Thought</td>
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<td>LAW 386H Reproductive and Sexual Health Law</td>
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<td><strong>Medieval Studies</strong></td>
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<tr>
<td>MST 3101H Current Theory and Medieval Texts: An Introduction</td>
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<tr>
<td>MST 3102H Topics in Current Theory and Medieval Texts (Courses with prerequisites)</td>
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<td><strong>Near and Middle Eastern Civilizations</strong></td>
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<td>NMC 1608H Life Cycle and Personal Status in Judaism</td>
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<td>NMC 1609H Gender-Related Topics in Law and Religion</td>
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<td>NMC 2035Y Women and Writing in Twentieth-Century Iran</td>
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<td><strong>Nursing Science</strong></td>
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<td>JNH 5002H The Body, Health Care, Technology and Place</td>
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<td>NUR 1021H Nursing Ethics</td>
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<td>NUR 1039H Women’s Health Across the Lifespan</td>
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<td>NUR 1040H Issues in Women’s Health Care</td>
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<td>NUR 1058H Aging, Gender and Equity</td>
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<td><strong>Philosophy</strong></td>
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<tr>
<td>PHL 2140H Feminist Philosophy</td>
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<td><strong>Political Science</strong></td>
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<td>JPJ 2049H International Women’s Rights Law</td>
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<td>POL 2024Y Feminist Theory; Challenges to Legal and Political Thought</td>
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<td>POL 2032H Judgement in Law and Politics</td>
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<td>POL 2037H Law, Religion and Public Discourse</td>
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<td>POL 2038H Pluralism, Justice and Equality</td>
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<tr>
<td><strong>Public Health Sciences</strong></td>
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<td>CHL 5109H Gender and Health</td>
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<tr>
<td>CHL 5117H A Global Perspective on the Health of Women and Children</td>
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<td><strong>Religion</strong></td>
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<td>RLG 2021H Historiography of Religions</td>
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<td>RLG 2025H Critical Social Theory and Feminist Religious Thought</td>
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<td>RLG 2026H Modernity, Postmodernity, and the Future of Religion</td>
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<td><strong>Social Work</strong></td>
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<td>SWK 4304H Globalization and Trans-nationalization: Social Work Responses Locally and Globally</td>
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<td>SWK 4306H Process of Social Exclusion, Marginalization, and Resistance</td>
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<td>SWK 4403H Women and Social Policy in Canada</td>
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<td>SWK 4420H Human Rights and Social Justice</td>
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<td>SWK 4606H Diversity, Access, and Equity in Social Work Practice</td>
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<td>SWK 4609H Sexuality, Sexual Diversity and Social Work Practice</td>
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<td>SWK 4618H Special Issues in Gerontological Social Work</td>
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<td>SWK 4623H Violence in Families: Multilevel Intervention in Interdisciplinary Practice</td>
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<td>SWK 4624H Feminist Social Work Practice</td>
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<td><strong>Sociology</strong></td>
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<td>SOC 6017H Sociology of Families I</td>
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<td>SOC 6117H Sociology of Families II</td>
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<tr>
<td>SOC 6019H Gender Relations I</td>
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<td>SOC 6119H Gender Relations II</td>
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<tr>
<td><strong>Sociology and Equity Studies in Education</strong></td>
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<tr>
<td>SES 1912H Foucault and Research in Education: Discourse, Power and the Subject</td>
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<tr>
<td>SES 1921Y The Principles of Anti-Racism Education</td>
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<tr>
<td>SES 1922H Sociology of Race and Ethnicity</td>
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<tr>
<td>SES 1923H Racism, Violence, and the Law: Issues for Researchers and Educators</td>
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<td>SES 1926H Race, Space and Citizenship: Issues for Educators</td>
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<td>SES 1954H Marginality and the Politics of Resistance</td>
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<td>SES 1956H Social Relations of Cultural Production in Education</td>
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<tr>
<td>SES 1957H Doing Disability in Theory and Everyday Life</td>
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<td>SES 1982H Women, Diversity, and the Educational System</td>
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<td>SES 1983H Gender, Race and Historical Sociology</td>
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<td>SES 1985H Women’s Learning, Women’s Health Movements, and the Health Professions</td>
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<td>SPA 2805H</td>
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<td>Theory and Policy Studies in Education</td>
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</tbody>
</table>

**Program Committee**

Karen Mirchandani - BA, MA, PhD - Adult Education & Counselling Psychology
Bonnie McElhinny - BA, MA, PhD - Anthropology (Director)
Holly Wardlow - BA, MPH, PhD - Anthropology
Alison Keith - BA, PhD - Classics
Julie LeBlanc - MA, PhD - Comparative Literature
Rosemary Gartner - BA, MS, PhD - Criminology
Tara Goldstein - BA, PhD - Curriculum, Teaching & Learning
Kay Armatage - BA, MA, PhD - Drama
Nancy Copeland - BA, MA, PhD - Drama

Women and Gender Studies 477
Collaborative Programs

Women’s Health

Lead Faculty
Medicine

Degree Programs Offered
Anthropology – MA, MSc, PhD
Dentistry – MSc, PhD
English – MA, PhD
Exercise Sciences – MSc, PhD
Health Policy, Management and Evaluation – MSc, PhD
Immunology – MSc, PhD
Information Studies – MISt, PhD
Medical Science – MSc, PhD
Nursing Sciences – MN, PhD
Nutritional Science – MSc, PhD
Occupational Science and Occupational Therapy – MScOT
Pharmacology and Toxicology – MSc, PhD
Psychology – MA, PhD
Public Health Sciences – MHSc, PhD
Religion – MA, PhD
Women and Gender Studies – MA

Overview
The graduate programs listed above, together with the support of The Centre for Girls’ and Women’s Health and Physical Education; Women and Gender Studies Institute; and the International Programme on Reproductive and Sexual Health Law participate in the Collaborative Graduate Program in Women’s Health. The program’s objectives are two-fold:
1. to provide interdisciplinary training in women’s health research and practice for graduate students at the University of Toronto;
2. to facilitate mutually beneficial relationships between researchers and practitioners of women’s health across the University and its 10 affiliated teaching hospitals.

Students must be registered with the School of Graduate Studies through one of the participating graduate units in order to apply to the Collaborative Graduate Program in Women’s Health. Applicants must comply with the admission procedures of that unit.

Contact and Address
Web: www.womensresearch.ca/graduate/
E-mail: CPWH@womensresearch.ca
Telephone: (416) 351-3732 ext. 2331
Fax: (416) 351-3746

Women’s Health Collaborative Program
c/o Women’s College Research Institute
7th floor, 790 Bay Street
Toronto, Ontario M5G 1N8
Canada
program are not required to repeat the course during their doctoral program.

- Participate in the Research Seminar Series (held monthly), and the Women's College Research Institute Graduate Student Research Day.
- A student devises a research plan that builds interdisciplinary research skills in women's health. The plan is developed with guidance from the student's primary mentor (graduate supervisor from their home unit) and the co-mentor (a core faculty member of the collaborative program); both mentors must sign this plan.
- Dissertation on a topic relevant to women's health.

**Core Course**
CHL 5109H  Gender and Health

**Program Committee**
Janice Boddy - BA, MA, PhD, FRSC - Anthropology (pending approval)
Ze'ev Seltzer - DMD, Canada Research Chair - Dentistry
Elisabeth Ruth Harvey - BA, MPhil, PhD - English
Margaret MacNeill - BPHE, MA, PhD - Exercise Sciences
Eleanor Fish - BSc, MPhil, PhD - Immunology
Donna Stewart - MD, DPsych, FRCP - Medical Science
Arlene Bierman - BA, MD, MS - Nursing Science
Wendy Ward - BASc, MSc, PhD - Nutritional Sciences
Helene Polatajko-Howell - BOT, MEd, PhD, OT(C) - Occupational Science & Occupational Therapy
Alison Fleming - BS, PhD - Psychology
Janet Polivy - BS, MA, PhD - Psychology
Gillian Einstein - PhD - Public Health Science (Director)
Rhonda Love - BA, MA, PhD - Public Health Sciences
Pamela Klassen - BA, MA, MPhil, PhD - Religion
Kathryn Morgan - BA, MA, MEd, PhD - Women & Gender Studies

Women’s Health 479
Advanced Design and Manufacturing

Faculty Affiliation
Applied Science and Engineering

Degree Programs Offered
Advanced Design and Manufacturing - MEngDM

Overview
The Advanced Design and Manufacturing Institute (ADMI) is a joint program in design and manufacturing offered at the master's level. It is offered through the joint efforts of five Ontario universities: University of Toronto, McMaster University, Queen's University, the University of Waterloo, and the University of Western Ontario. The joint nature of the program ensures that the very best expertise available at each of the participating schools is integrated into the program's course offerings.

Within the University of Toronto, the degree designation is Master of Engineering in Design and Manufacturing. The joint program, fully described on www.admicanada.com, is structured to address the engineering design, manufacturing, and management expertise and knowledge base required by young graduate professionals actively engaged within industry, government, and business.

Due to the part-time modular nature of the program, it is available only to Canadian citizens and permanent residents of Canada. The program allows individuals to participate in graduate studies over four-day weekend periods that can be effectively incorporated into a regular working schedule. The ADMI courses are offered at various locations within southern Ontario, typically Toronto, Waterloo, Mississauga, Hamilton, and London. Courses are offered throughout the year and do not conform to the regular university semester structures.

Contact and Address
For information regarding ADMI admission at the University of Toronto, contact by mail:
Graduate Studies Office
Department of Mechanical and Industrial Engineering
5 Kings College Road
University of Toronto
Toronto, Ontario M5S 3G8
Canada
E-mail: adm@mie.utoronto.ca
Telephone: (416) 978-8823
Fax: (416) 978-3453

For information regarding ADMI admission at the University of Toronto, visit in person:
Graduate Studies Office
Department of Mechanical and Industrial Engineering
Rosebrugh Building
Room 214, 164 College Street

Degree Programs
Master of Engineering in Design and Manufacturing

Minimum Admission Requirements
• Students entering the program at the University of Toronto are required to register in the Department of Mechanical and Industrial Engineering.
• Four-year bachelor's degree in engineering. Individuals with undergraduate and or graduate degrees in the related fields of computer science, physics, etc. are also invited to apply.
• Applicants will normally have three years of post-baccalaureate experience in industry or its equivalent.

Program Requirements
• 10 ADMI course offerings. Details at www.admicanada.com.
• Two of the required 10 courses may be replaced by an approved industry project, with University supervision.
• Whether or not a project is undertaken, program participants are required to complete a minimum of five courses from the Technology and Process Stream and a minimum of two from the Business and Management Stream.
• Participants must complete a minimum of two ADMI courses per calendar year to maintain program registration status.

Courses
A list of course offerings, along with course descriptions and a current schedule, is available on the ADMI Web site, www.admicanada.com.
Program Committee
The committee of the Advanced Design and Manufacturing Institute (ADMI) comprises eight members: six from the participating member universities plus two members from industry. The Executive Director of ADMI, D. Heaslip, chairs the Program Committee.
University of Toronto Program Committee Representative:
Pierre Sullivan - BSME, MSME, PhD, PEng - Mechanical & Industrial Engineering
Biotechnology 

BTC

Faculty Affiliation
Arts and Science, Management

Degree Programs Offered
Biotechnology - MBiotech

Overview
The Master of Biotechnology (MBiotech) program is an interdisciplinary course-based professional degree involving collaboration between the Departments of Cell and Systems Biology, Chemistry, and the Rotman School of Management.

Students in the MBiotech program come from wide and varied backgrounds with the common goal of pursuing a career in the biotechnology, financial, and pharmaceutical industries. The program is designed to meet the evolving needs of students and this global industry sector. Faculty is drawn from the Departments of Cell and Systems Biology, Chemistry, and Management. Guest lecturers from other faculties within the University of Toronto provide students with a truly interdisciplinary educational experience. Additional instruction from leaders of the biotechnology and pharmaceutical industries and from governmental agencies round out the broadly-based learning environment.

Contact and Address
Web: www.mbiotech.ca
E-mail: mbiotech@utoronto.ca
Telephone: (905) 569-4737
Fax: (905) 569-4738

Master of Biotechnology Program
Room 2071, South Building
University of Toronto at Mississauga
3 359 Mississauga Road North
Mississauga, Ontario L5L 1C6
Canada

Degree Programs

Master of Biotechnology

Minimum Admission Requirements

- Four-year bachelor’s degree or its equivalent in any area of biological sciences, chemistry, engineering, or related field.
- Acceptable GRE scores and/or marks of A- or better in the last two years of study.

Program Requirements

- The program is a full-time, course-based master’s degree which is launched during the month of May each year.
- Students are required to complete 8 graduate full-course equivalents (FCE) over a 24-month period:
  - 5.0 to 6.0 FCE science credits (includes credits for Seminar and Placement)
  - 2.0 FCE business credits
  - up to 1.0 FCE elective credit
- An ongoing seminar series led by university, industry, and government specialists link all the participants with the academic, practical, and applied aspects of the program.

Courses

Required
A general description of each required course is posted on the Web site, www.mbiotech.ca.

BTC 1600H Seminar in Bioscience/Biotechnology I
BTC 1610H Seminar in Bioscience/Biotechnology II
BTC 1700H Molecular Biology Laboratory
BTC 1710H Protein Chemistry Laboratory
BTC 1800H Biotechnology in Medicine
BTC 1810H Biotechnology and Corporations
BTC 1820H Biotechnology in Agriculture and Natural Products
BTC 1900Y Work Term I
BTC 1910Y Work Term II
BTC 1920Y Work Term III
BTC 2000H Organizational Skills
BTC 2010H Fundamentals of Managerial Concepts
BTC 2020H Science, Technology, Organizations and Society
BTC 2030Y Management of Technological Innovation

Elective

BTC 1830H Medical and Scientific Challenges in Marketing Therapeutics
BTC 2100Y Topics in Biotechnology
BTC 2110H Topics in Biotechnology
BTC 2120H Topics in Biotechnology
Other graduate courses approved by the Program Directors.

"Courses which may continue over a program. The course is graded when completed."
Program Committee
Ulrich Krull - BSc, MSc, PhD, AstraZeneca Professor of Biotechnology - Chemistry
Angela Lange - BSc, PhD - Cell & Systems Biology
Scott Prosser - BSc, MSc, PhD - Chemistry (Director)
Leigh Revers - MA, DPhil - Cell & Systems Biology (Assistant Director)
Mihkel Tombak - BASc, MBA, AM, PhD - Management
J. Timothy Westwood - BSc, MSc, PhD - Cell & Systems Biology

Additional faculty are selected from the Departments of Cell and Systems Biology, Chemistry, the Rotman School of Management, related departments, as well as from experts from industry and government.
Joint Programs

Financial Economics

Faculty Affiliation
Arts and Science, Management

Degree Programs Offered
Financial Economics – Master of Financial Economics

Overview
The Master of Financial Economics Program is a small enrolment joint program of the Department of Economics and the Rotman School of Management. Graduates of the program receive a professional degree called the Master of Financial Economics (MFE). The 16-month program is designed to equip talented students with the tools and skills required for successful careers in the financial sector. Its objectives are to provide students with a broad understanding of financial theory and the economic framework upon which that theory is based, both in the classroom and through actual experience working for firms in the financial sector.

Contact and Address
Web: www.economics.utoronto.ca/mfe
E-mail: fineco@chass.utoronto.ca
Telephone: (416) 978-8623
Fax: (416) 978-6713

Joint Master of Financial Economics Program
150 St. George Street
Department of Economics
University of Toronto
Toronto, Ontario M5S 3G7
Canada

Degree Programs

Master of Financial Economics

Minimum Admission Requirements
- Applicants must have completed or must be in the final year of a four-year or honours degree program, or equivalent, with a B+ standing in the final year of that program.

- Strong preparation in economics, including full-year courses in both intermediate-level micro and macro theory, and full-year university-level courses in each of calculus and statistics. Previous training in finance is useful but not required. Achievement of these minimum requirements does not guarantee acceptance into the program. Preference is given to students who have completed, with high standing, advanced-level courses in any or all of economics, mathematics, and econometrics.

Program Requirements
- 6.0 full-course equivalents (FCE) or 12 half-courses, a 4-month summer internship, and an intensive mathematics, statistics, and accounting review.

- The core program consists of 2.0 FCE from the Department of Economics and 1.5 FCE from the Rotman School. The core courses drawn from the Department of Economics are the same as the core courses required for the MA degree in Economics plus ECO 2503H Financial Economics I. The core courses from the Rotman School (MGT 2306H Options and Futures Markets, MGT 2300H Corporate Financing, MGT 2302H Security Analysis and Portfolio Management) are drawn from the second-year MBA level courses and provide students with training in key areas of finance.

- In addition to the core courses, students are free to choose 2.5 FCE in electives from either the Department of Economics or the Rotman School, subject to the condition that at least 3.5 out of the 6.0 FCE must be taken from the Department of Economics. Students may choose from a long list of elective courses offered at the graduate level in Economics or the second-year MBA level (or higher) from the Rotman School, subject to availability.

Program Committee
Varouj Aivazian - BS, MA, PhD - Economics (Director)
Michelle Alexopoulos - BSc, MA, PhD - Economics
Gordon Anderson - BA, MSc, PhD - Economics
Jack Carr - BCom, MA, PhD - Economics
Maria Luisa Fuster - BA, MA, PhD - Economics
Chuan Goh - BSc, MA, PhD - Economics
Gregory Jump - BA, PhD - Economics
John Maheu - BA, MA, PhD - Economics
Ekaterina Malinova - BSc, MA, PhD - Economics
Angelo Melino - BA, PhD - Economics
Jordi Mondria - BA, MA, PhD - Economics
Andreas Park - MSc,MPh,Phd - Economics
James Pesando - BA, MA, PhD - Economics
Adonis Yatchew - BA, MA, PhD - Economics
Xiaodong Zhu - BSc, MSc, PhD - Economics
Laurence Booth - BSc, MA, MBA, DBA - Management
Paul Halpern - BCom, MBA, PhD - Management
John Hull - BA, MA, PhD - Management
Eric Kirzner, MBA - Management
Thomas McCurdy - BA, MA, PhD - Management
Alan White - BEng, MBA, PhD - Management
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